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Works.

# THE CHEMIST AND DRUGGIST

TELEPHONE NUMBER  
BANK 852.TELEGRAPHIC ADDRESS  
"CHEMUS LONDON."Established in  
**ENGLAND, 1859.]**Published Weekly at 42 CANNON STREET,  
LONDON, E.C.Established in  
**AUSTRALASIA, 1885**

No. 1,544. VOL. LXXV.

AUGUST 28, 1909

(Subscription, 10s. per annum, including Diary.  
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Winter and Summer Issues, 1s. each. Post Free.)

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Liquid Confection of Senna, 2 oz. 4/-; 4 oz. 7/- doz.  
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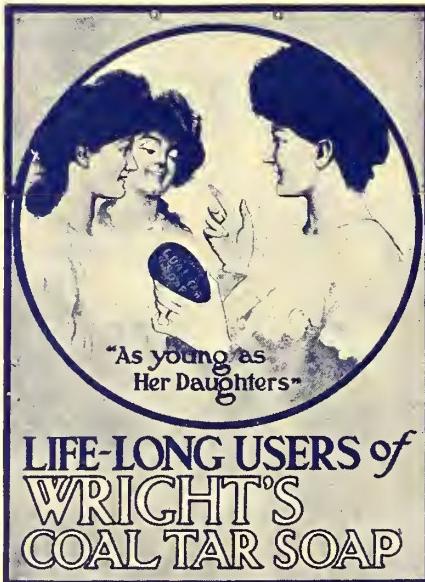
**Allen & Hanburys Ltd., London.**

# Wright's Coal Tar Specialities

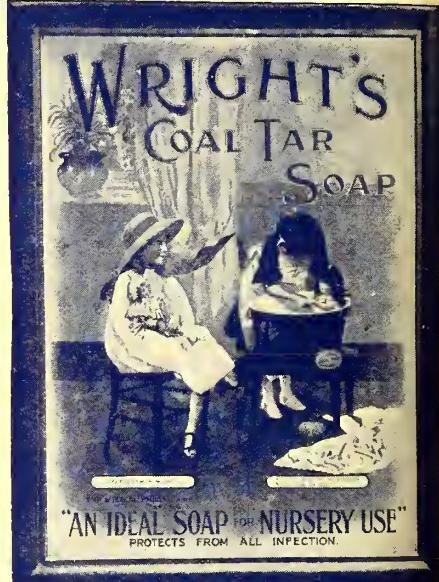
Show Material of every description  
 ↗ For WINDOW and COUNTER DISPLAY. ↗



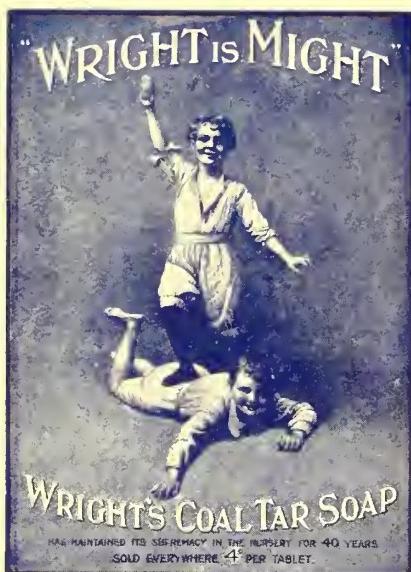
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AND  
"GRANGE WORKS"  
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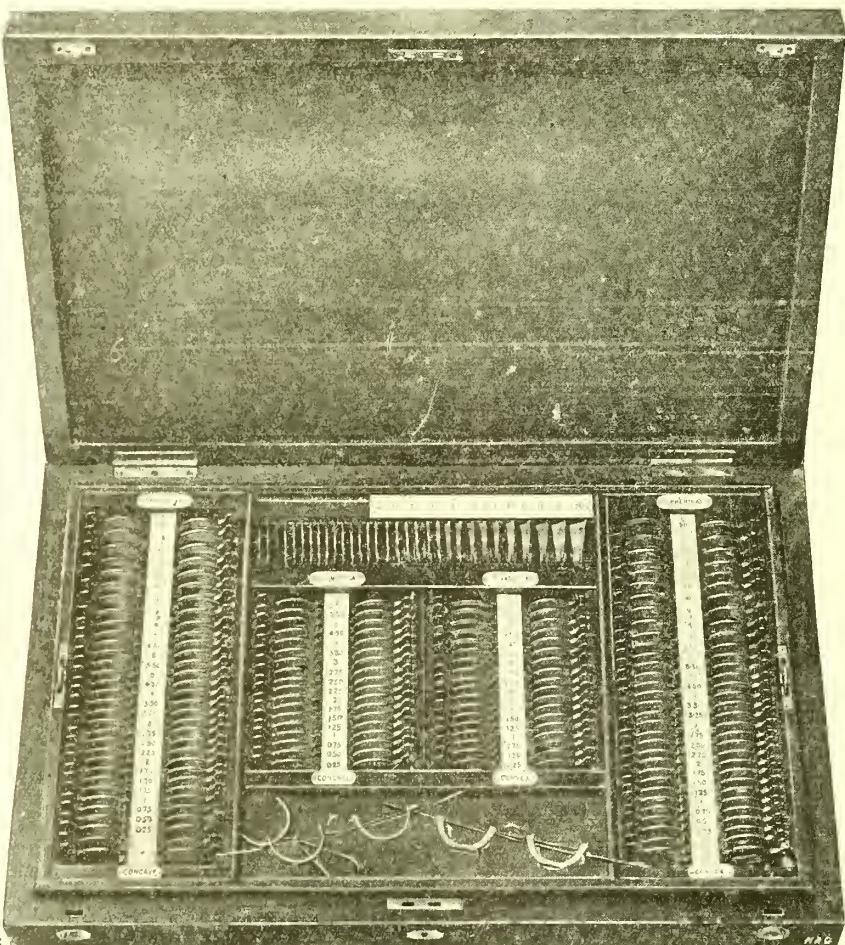
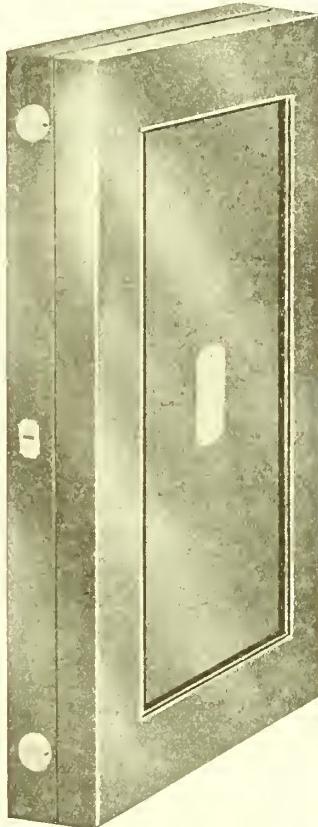
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In this section, under appropriate headings, are given the names of firms advertising in this or other issues of the month. No charge is made to advertisers for the insertion of their names, but only those who have contracts current for advertising in this journal are mentioned. The headings refer generally to the classes of goods actually advertised, but this is not a detailed Guide such as appears in "The Chemists' and Druggists' Diary." Inquiries addressed to "The Chemist and Druggist," 42 Cannon Street, London, E.C., regarding articles not appearing in these pages will receive prompt attention.

**ACETIC ACID**

Boehm, Fredk., Ltd.  
Crown Chemical Works, Ltd.

**ADVERTISING IDEAS**

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Degen, F. A.  
Plastic Advertisement Co.  
Slack, Bernard

**AER-WATER MACHINERY**

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(See also Soda FOUNTAINS)

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Brunner, Mond & Co.  
Bush, W. J., & Co., Ltd.  
Hay, William, Ltd.  
Stevenson & Howell, Ltd.  
Sthamer, Dr. Richard  
(See also ESSENCES, SOL.)

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Jewsbury & Brown

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Hutchinson Co.

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Murdoch, John, & Co.  
Peake, Allen & Co.  
Sankyo & Co.

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Boehringer, C. H., Sohn  
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Howards & Sons, Ltd.  
Macfarlan, J. F., & Co.

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**AMMONIA AND ITS SALTS**

Brown & Blackhurn  
Burt, Boulton & Haywood, Ltd.  
Nichols Chemical Co., Ltd.  
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White, A., & Sons

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Fullwood, R. J., & Bland

**ANTIMONY AND ITS SALTS**

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Duncan, Flockhart & Co.  
Macfarlan, J. F., & Co.  
Smith, T. & H., Ltd.  
Zimmermann, C., & Co.  
(See also CHLOROFORM)

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Schutze, F., & Co.

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Hutchinson Co.

Maw, S., Son & Sons

Schutze, F., & Co.

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Darton, F., & Co.

Raphael, Ltd.

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Howards & Sons, Ltd.  
May & Baker, Ltd.  
Morson, T., & Son  
Reitmeyer & Co.

Tyler, T., & Co., Ltd.

White, A., & Sons

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Lewis, H. K.  
Macmillan & Co.  
Martindale's "Extra Phar."  
"Prescriber, The"  
Pitman, Sir L., & Sons, Ltd.  
Southall Bros. & Barclay, Ltd.  
Squire's "Companion"

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Potter & Clarke, Ltd.

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Barnett & Foster  
Boling, Brown & Co.  
Brefit, E., & Co., Ltd.  
Bush, H. W., & Co., Ltd.  
Chemists' Co-operative Wholesale  
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Kilner Bros., Ltd.  
Lang, Jules, & Son  
Maw, S., Son & Sons  
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Poths, H., & Co.  
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Youldon, E., Ltd.

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Harrison & Waide  
May, Roberts & Co.  
Robinson & Sons, Ltd.  
Rogers & Co.  
Stipendum Stopper Co.

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**BROMINE AND BROMIDES**

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Merck, E.

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Hovenden, R., & Sons, Ltd.  
Kent, G. B., & Sons, Ltd.  
Maw, S., Son & Sons  
May, Roberts & Co.  
Nicholls, W. G., & Co.

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Chemists' Co-operative Wholesale  
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May & Baker, Ltd.

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Visoco Co., Ltd. (self-fixing)

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Tye, J., & Son  
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Hoffmann-La Roche, Ltd.  
(See also DISINFECTANTS)

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**CARTONS**

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Harrison & Waide

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O'Brien, T.

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Kay Bros., Ltd.

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Mumford, G. S., & Sons  
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Sturge, John & E.

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Bramwell, E., & Son  
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Brunner, Mond & Co., Ltd.  
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Harrington Bros., Ltd.  
Hoffmann-La Roche, Ltd.  
Howards & Sons, Ltd.  
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Reitmeyer & Co.  
Schimmele & Co.  
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Sturge, John & E.  
Tyrrer, T., & Co., Ltd.  
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Blackie, R.  
Brady & Martin, Ltd.  
British Drug Houses, Ltd.  
Burroughs Wellcome & Co.  
Bush, W. J., & Co., Ltd.  
Davenport, J. T., Ltd.  
Duncan, Flockhart & Co.  
Evans Sons Lescher & Webb, Ltd.  
Fletcher, Fletcher & Co.  
Hay, William, Ltd.  
Hewlett, C. J., & Son  
Kutnow, S., & Co., Ltd.  
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(See also WHOLESALE)

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Sturge, John & E.

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(See also DAIRY ADJUNCTS)

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Devold, Peder  
Evans Sons Lescher & Webb, Ltd.  
Goodall, Backhouse & Co.  
Lloyd, T. Howard, & Co.  
Oldfield, Pattinson & Co.  
Southall Bros. & Barclay, Ltd.  
Woolley, Jas., Sons & Co., Ltd.  
Wright, Layman & Umney, Ltd.  
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Zimmermann, C., & Co.

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**CORN FILE**

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**CREOSOTE**

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Burt, Boulton & Haywood

Morson, T., & Son

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Norwich Crêpe Co. (1856), Ltd.

Wood, Vincent

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Odol Chemical Works

Standard Tablet & Pill Co.

Woods, W., & Son

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Condy & Mitchell, Ltd.

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Roberts, Cornforth & Co.

Sanitas Co., Ltd.

Tomlinson & Hayward, Ltd.

Willows, Francis B. & T.

Wright, Layman & Umney, Ltd.

Zimmermann, C., & Co.

**DOSE REGULATORS**

Reuter, R. J.

**DRUGISTS' SUNDRIES**

Ayton, Sanders & Co., Ltd.

Barlow & Sons, Ltd.

Berliner, Arthur

Burge, Warren & Ridgley

Bush, H. W., & Co., Ltd.

Chemists' Co-operative Wholesale

Christy, T., & Co.

Cook, Alfred, & Co.

Davis, J. M., & Sons

Edwards, W., & Son

Evans Sons Lescher & Webb

Fecher, M. J.

Gutmann, A. E., & Co.

Hatrik, James L., & Co., Ltd.

Hay, J. B., & Co.

Hewlett, C. J., & Sons

Hovenden, R., & Sons, Ltd.

Johnsen & Jorgensen, Ltd.

Lennon, Ltd.

Maw, S., Son & Sons

May, Roberts & Co.

Murdoch, John, & Co.

Newhery, F., & Sons, Ltd.

Poths, H., & Co.

Quelch, H. C., & Co.

Reuter, R. J.

Sangers'

Schutze, F., & Co.

Solport Bros.

Southall Bros. & Barclay, Ltd.

Tidman & Son, Ltd.

Toogood, W., Ltd.

Visoco Co., Ltd.

Wood, Vincent

Woolley, J., Sons & Co.

**DRUGS, CRUDE**

Hornier & Sons

Potter & Clarke, Ltd.

Ransom, W., & Son

Salle, H., & Cie.

**DYES**

Judson, D., & Son

Whitaker & Co.

**EAU DE COLOGNE**

Breidenbach & Co.

Farina, J. M.

Farina, J. M. (No. 4)

Fickus, Courtenay & Co.

McCracken, J. & R.

Schutze, F., & Co.

**EDUCATIONAL INSTITUTIONS**

Bath and West of England College of Pharmacy

Birmingham and Midland College of Pharmacy

British Optical Institute

Burlington Correspondence College

Charing Cross Hospital Medical College

City of London College

Edinburgh Central School of Pharmacy

Glasgow School of Pharmacy

Goldsmiths' Technical College

Institute of Chemistry

Leeds College of Pharmacy

Leeds Education Committee

Liverpool School of Pharmacy

London College of Pharmacy

Manchester College of Pharmacy

Mutter's (So. Lond.) School of Pharmacy

National Dental Hospital College

North of England School of Pharmacy

North Stafford School of Pharmacy

Northern College of Pharmacy

Nottingham School of Pharmacy

Pharmaceutical Society's School of Pharmacy

Royal Dental Hospital School

Royal (Dick) Veterinary College

Royal Dispensary (Edinburgh)

St. Andrew's University

South of England College of Pharmacy

South-Western Polytechnic

University of Birmingham

University of Bristol

University of Durham

University of Edinburgh

University of Liverpool

University of Manchester

Westminster College of Pharmacy

**EFFERVESCENT PREPS.**

Allen & Hanburys, Ltd.

Bishop, Alfred, Ltd.

**EFFERVESCENT PREPS.**

(continued)—

Evans Sons Lescher & Webb, Ltd.  
Goodall, Backhouse & Co.  
Kntnow, S., & Co., Ltd.  
Lloyd, T. Howard, & Co.  
Lorimer & Co., Ltd.  
Newball & Mason  
Potter & Clarke  
Standard Tablet & Pill Co.  
Starge, John & E.  
Tidman & Son, Ltd.  
Tyre, T., & Co., Ltd.  
Wright, Layman & Umney

**ELASTIC HOSIERY**

Ayton, Saunders & Co., Ltd.  
Berliner, Arthur  
Burge, Warren & Ridgley, Ltd.  
Haywood, J. H.  
Maw, S., Son & Sons  
Wood, Vincent  
**EMERY AND CLOTH**  
Oakley, J., & Sons, Ltd.  
**EMULSIONS, COD-LIVER OIL, ETC.**  
Allen & Hanhrays, Ltd.  
Ayton, Sannders & Co.  
Bais Bros. & Stevenson, Ltd.  
Blackie, Robert  
British Drng Hoses, Ltd.  
Evans Sons Lescher & Webb, Ltd.  
Fanning, F. H., & Co.  
Harker, Stagg & Morgan, Ltd.  
Lorimer & Co., Ltd.  
Oldfield, Pattinson & Co.  
Scott & Bowne, Ltd.  
Parke, Davis & Co.  
Woolley, Jas., Sons & Co.  
Woolleys, Ltd.

**ENEMAS**

Bailey, W. H., & Son  
Burge, Warren & Ridgley  
Davol Rnher Co.  
Hatrick, James L., & Co., Ltd.  
Hay, J. B., & Co.  
Ingram, J. G., & Son  
Maw, S., Son & Sons  
Toogood, W., Ltd.  
Warne, W., & Co., Ltd.

**ENTOMOLOGICAL APPARATUS**

Watkins & Doncaster  
**EPSOM SALTS**  
Howards & Sons, Ltd.  
**ESSENCES, CONCRETE**  
Lantier Fils  
Murray, O., & Co., Ltd.  
Rorre-Bertrand fils  
Schmoller & Bompard  
**ESSENCES, SOL. AND FRUIT**  
Alliance Drug & Chem. Co.  
Bais Bros. & Stevenson, Ltd.  
Barnett & Foster  
Boake (A.), Roberts & Co., Ltd.  
Bush, W. J., & Co., Ltd.  
Evans Sons Lescher & Webb  
Hay, Wm., Ltd.  
Lantier Fils  
London Essence Co.  
Lorimer & Co., Ltd.  
Newhall & Mason  
Rorre-Bertrand fils  
Spencer, J., Son & Co.  
Stevenson & Howell, Ltd.  
Zimmermann, A. & M.

**ETHERS**

Bais Bros. & Stevenson, Ltd.  
Maofarlan, J. F., & Co.  
May & Baker, Ltd.  
Tyre, T., & Co., Ltd.  
White, A., & Sons

**EUCALEPTUS OIL**

British Drng Houses, Ltd.  
Bais Bros. & Stevenson, Ltd.

**EXTRACT OF HERBS**

Newball & Mason  
Potter & Clarke

**EXTRACTS (MEDICINAL)**

Allen, Stafford, & Sons, Ltd.  
Chemists' Co-operative Wholesale  
Hewlett, C. J., & Son  
Parke, Davis & Co.  
Ransom, W., & Son  
(See also WHOLESALE DRUGGISTS)

**FEEDING BOTTLES**

Brefitt, E., & Co., Ltd.  
Fecher, M. J.  
Hovenden, R., & Sons, Ltd.  
Kilner Bros., Ltd.  
Maw, S., Son & Sons  
Sangers'

**FILTERS (WATER)**

Verkfeld Filter Co., Ltd.

**FLESH GLOVES**

Sangers'

**FLYCATCHERS**

Alastine Co. (British), Ltd.  
Deansmere Manfg. Co.  
Flykatcho  
Ford, Shapland & Co.  
Frowein, C.  
Key Bros., Ltd.  
Smith, J. H., & Co.  
Strong, Christy  
Tanhridge & Wright

**FOODS, INFANTS'**

Allen & Hanhrays, Ltd.  
Benger's Food, Ltd.  
Frame Food Co., Ltd.  
Loftstone & Saltmer  
Natral Food Co., Ltd.  
Willows, Francis, B. & T.

**FORMALDEHYDE**

Hart, Honiton & Haywood

**FOODS, SPECIAL**

Allen & Hanhrays, Ltd.  
Benger's Food, Ltd.  
Brand & Co., Ltd.  
Burt, C. J.  
Buvo, Ltd.  
Callard & Co.  
Fairchild Bros., & Foster  
Frame Food Co., Ltd.  
Menley & James, Ltd.  
Natural Food Co., Ltd.  
Wander, A.

**FRUIT CRYSTALS**

Aerators, Ltd.

**FRUIT SYRUPS**

Idris & Co., Ltd.

**FULLER'S EARTH**

Mumford, G. S., & Sons

**FUMIGATORS**

Sanitas Co., Ltd.

**GELATIN AND GLUE**

Boehm, F., Ltd.

**GLASSWARE, CHEMICAL**

Zahradnik, Jos.

**GLAUBER'S SALT**

Bramwell, E., & Son

Howards & Sons, Ltd.

**GLYCERIN**

Boehm, F., Ltd.

Price's Patent Candle Co.

**GLYCEROPHOSPHATES**

Fointet & Girard

**GOLD PAINT**

Judson, D., & Son

**GRINDERS**

Allen, Stafford, & Sons, Ltd.

Goodall, Backhouse & Co.

Willows, Francis B. & T.

**HAIR WAVERS AND CURLERS**

Mercham Trading Co., Ltd.

**HAIR PREPARATIONS**

Capsuloids (1909), Ltd.

Chesbrough Manfg. Co.

Edwards' "Harlene" Co.

Harker, Stagg & Morgan

Hericide Co.

John Strange Winter

Martine & Co.

Robare's Aureoline

Rowland, A., & Sons

Woolleys, Ltd.

**HAT DYES**

Whitaker & Co.

**HAT RENOVATORS**

Christy, T., & Co.

**HEATING FLASKS**

Gutmann, A. E., & Co.

**HERBS**

Potter & Clarke

**HOMEOPATHIC MEDICINES**

Ashton & Parsons, Ltd.

Keene & Ashwell, Ltd.

Leath & Ross

**HOTELS**

Esmond Hotel

Kingsley Hotel

Thackeray Hotel

**HOT-WATER BOTTLES**

Berliner, Arthur

Burge, Warren & Ridgley

Fulham Pottery & Cheavin

Filter Co., Ltd.

Hutchinson Co.

Maw, S., Son & Sons

May, Roberts & Co.

Sonthall Bros. & Barclay

Wood, Vincent

**HYDROGEN PEROXIDE**

May & Baker, Ltd.

Sanitas Co., Ltd.

Tyler, T., & Co., Ltd.

**HYPOPHOSPHITES**

May & Baker, Ltd.

Tyler, T., & Co., Ltd.

**INHALERS**

Christy, T., & Co.

Fecher, M. J.

Sangers'

**MAILING CASES**

May, Roberts & Co.

**INK**

Bewley & Draper, Ltd.

Hickisson, A. B.

**INSECTICIDES**

Christy, Thos., & Co.

Smith, B. A., & Co.

Tomlinson & Hayward, Ltd.

Voss, Walter, & Co.

White, E. A., Ltd.

Woolleys, Ltd.

**INSECT POWDER**

Boehm, F., Ltd.

Smith, B. A., & Co.

**IODINE AND IODIDES**

Howards & Sons, Ltd.

Morson, T., & Son

**ITROSYL**

Fletcher, Fletcher & Co.

**JARS AND POTS**

Boling, Brown & Co.

Brefitt, E., & Co., Ltd.

Bush, H. W., & Co., Ltd.

Cook, A., & Co.

Johnsen Bros., Ltd.

Kilner Bros., Ltd.

Lang, Jules, & Son

Maw, S., Son & Sons

Poths, H., & Co.

Reuter, R. J.

Stipendum Stopper Co.

Toogood, W., Ltd.

**LACTIC FERMENTS**

Allen & Hanhrays, Ltd.

Cox, Arthur H., & Co., Ltd.

Davies, Sons, & Co.

Martindale, W.

Parke, Davis & Co.

Wilcox, Jozear & Co.

**LAMPS, DISINFECTION**

Roberts, Cornford & Co.

**LANOLINE**

Burroughs Wellcome & Co.

Christy, T., & Co.

Sangers'

**LARD**

Chemists' Co-operative Wholesale

Ewen, J., & Sons

**LIME JUICE AND CORDIAL**

Evans Sons Lescher & Webb

Goodall, Backhouse & Co.

Idris & Co., Ltd.

**LINSEED, CRUSHED, ETC.**

Allen, Stafford, & Sons

Mumford, G. S., & Sons

**LINTS**

Vernon & Co., Ltd.

**LIQUORICE JUICE**

Boehm, F., Ltd.

British Drug Hoses, Ltd.

Evans Sons Lescher & Webb, Ltd.

Horner & Sons

Jackson, E. E.

Mumford, G. S., & Sons

**LIQUORS, CONC., ETC.**

Allen, Stafford, & Sons, Ltd.

Fletcher, Fletcher & Co.

Hewlett, C. J., & Son

Robinson, B., & Co.

**LITHIA SALTS**

British Drug Hoses, Ltd.

May & Baker, Ltd.

Merck, E.

**LOZENGES**

Allen & Hanhrays, Ltd.

Cox, A. H., & Co., Ltd.

Denoual, J., & Co.

Jackson, E. E.

Meggson & Co., Ltd.

Potter & Clarke

Raines & Co

Warrick Bros.

**MACHINERY, PHARMACAL**

Allen & Hanhrays, Ltd.

Bennett, E., & Son, Ltd.

Bennett, Sons & Shears, Ltd.

Fecher, M. J.

Gardner, Wm., & Sons, Ltd.

Pindar, J. W., & Co.

Smith, B. A., & Co.

Stokes, F. J., Machine Co.

Thompson & Capper (Stokes)

Wilkinson, S. W., & Co.

**MAGNESIA AND ITS SALTS**

Henry, T. & W.

Howards & Sons, Ltd.

May & Baker, Ltd.

Washington Chemical Co.

**MAILING CASES**

May, Roberts & Co.

**MALT EXTRACT AND PREPS.**

Allen & Hanhrays, Ltd.

Baiss Bros. & Stevenson, Ltd.

Blackie, R.

British DiaMalt Co.

Burroughs Wellcome & Co.

Evans Sons Lescher & Webb

Hewlett, C. J., & Son

Lorimer & Co., Ltd.

Paine & Co., Ltd.

Southall Bros. & Barclay, Ltd.

Squires' Sons

Woolley, Jas., Sons & Co., Ltd.

Wright, Layman & Umney

**MARKING INK**

Hickisson, A. (Bond's)

**MEASURFS**

Bush, H. W., & Co., Ltd.

**MEAT EXTRACTS**

Armour & Co., Ltd.

Brand & Co., Ltd.

Buvo, Ltd.

**MEDICINE CHESTS**

Burroughs Wellcome & Co.

Keene & Ashwell, Ltd.

Leath & Ross

Lloyd, T. Howard, & Co.

Parke, Davis & Co.

**MENTHOL CONES**

Bush, H. W., & Co., Ltd.

Maw, S., Son & Sons

**MERCURIALS**

Howards & Sons, Ltd.

May & Baker, Ltd.

Merck, E.

Tyler, T., & Co., Ltd.

**METEOROLOGICAL SETS**

Darton, F., & Co.

**METHYLATED SPIRIT**

Burrough, J., Ltd.

Preston's Liverpool Distillery

Randall & Son, Ltd.

**MILK APPARATUS**

Barton, F., & Co.

**MINERAL WATERS AND SALTS**

Apollinaris Co., Ltd.

British Drng Houses, Ltd.

Hughes, E. Griffiths

Ingram & Royle, Ltd.

Vichy (State Springs)

**MOTOR GOGGLES**

Darton, F., & Co.

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**OPTICAL GOODS**

Botwright & Grey  
Darton, F., & Co.  
Maw, S., Son & Sons  
Newbery, F., & Sons, Ltd.  
Nitsche & Günther  
Raphael's, Ltd.  
Richardson, S. (Hardy & Co.)

**OPTICAL INSTRUCTION**  
British Optical Institute**OTTO OF ROSE**

Bontcheff & Kidoff  
Pappazoglou, D.  
Reitmeyer & Co. (synthetic)  
Scheller, Emil & Co.  
Seraphimoff, S., & Co.  
Shipkoff & Co.

**PACKED GOODS**  
(See Wholesale)**PALATINOIDS**

Oppenheimer, Son & Co  
PASTILLES  
Allen & Hanburys, Ltd.  
Asche, C. F., & Co.  
Baiss Bros. & Stevenson  
Burroughs Wellcome & Co.  
Denoual, J., & Co.  
Evans Sons Lescher & Webb  
Meggeson & Co., Ltd.  
Warrick Bros.

**PATENT AGENT**

Barker, R. W.

**PERFUMES**

Allen & Hanburys, Ltd.  
Barclay & Sons, Ltd.  
Breidenbach & Co.  
Bronnley, H., & Co., Ltd.  
Bush, W. J., & Co., Ltd.  
Christy, T., & Co.  
Chuit, Naef & Co.  
Erasmic Co., Ltd.  
Evans Sons Lescher & Webb, Ltd.  
Hewlett, C. J., & Son  
Hovenden, R., & Sons, Ltd.  
John Strange Winter.  
Lescol Perfumery Co.  
McCracken, J. & R.  
Maw, S., Son & Sons  
Newbery, F., & Sons, Ltd.  
Quelch, H. C., & Co.  
Scheller Emil & Co.  
Southall Bros. & Barclay  
Spencer, J., Son & Co.  
To-Kalon Mfg. Co.  
Warrick Bros.  
West, T., & Son  
Yardley & Co., Ltd.

**PERFUME MATERIALS**

Bush, W. J., & Co., Ltd.  
Bontcheff & Kidoff  
Chiris, Antoine  
Compagnie Morana  
Flora Chemical Works, Ltd.  
Lautier fils  
Mühlethaler, Th., Ltd.  
Murray, O., & Co., Ltd.  
Schimmel & Co.  
Shipkoff & Co.  
Spencer, J., Son & Co.  
Zimmermann, C., & Co.

**PESSARIES**

Burge, Wrenn & Ridgley  
Rendell, W. J.

**PETROLEUM EMULSION**  
British Drug Houses, Ltd.**PETROLEUM JELLY**  
Chesebrough Mfg. Co.**PHOTO. CHEMICALS**

Boehringer, U. F., & Soehne  
Burroughs Wellcome & Co.  
Lockyer, J. E.  
Merck, E.

**PHOTO. ENLARGERS,  
PRINTERS, &c.**

Express Developing Co.  
Halifax Photographic Co.

**PHOTO. GOODS**

Barclay & Sons, Ltd.  
Darton, F., & Co.  
Evans Sons Lescher & Webb  
Halifax Photographic Co.  
Ilford, Ltd.  
Lennon, Ltd.  
May, Roberts & Co.  
Murdock, John, & Co.  
Newbery, F., & Sons, Ltd.

**PILL MAKERS**

Allen & Hanburys, Ltd.  
Asche, C. F., & Co.  
Bishop, Alfred, Ltd.  
British Drug Houses, Ltd.  
Cox, A. H., & Co., Ltd.

**PILL MAKERS (continued)—**

Davies, Sons & Co.  
Evans Sons Lescher & Webb, Ltd.  
Hewlett, C. J., & Son  
Howards & Sons, Ltd.  
Lloyd, T. Howard, & Co.  
McKesson & Robbins  
Parke, Davis & Co.  
Southall Bros. & Barclay  
Standard Tablet & Pill Co.  
Wand Mfg. Co.  
Warner, W. R., & Co.  
Woolley, J., Sons & Co., Ltd.

**PLASTERS**

Allcock Mfg. Co.  
Berliner, Arthur  
Beiersdorf, P., & Co.  
Dalmas, A. de St., & Co.  
Leslies, Ltd.  
Maw, S., Son & Sons  
Sopros Bros.

**PLASTIC MODELS**

Plastic Advertising Co.

**POLISHES (VARIOUS)**

Bradley & Bourdas  
Judson, Daniel, & Son  
Oakley, J., & Son, Ltd.

**POSTERS**

Ford, Shapland & Co.

**PRINTERS**

Dudley & Co.  
Ford, Shapland & Co.  
Harrison & Waide  
Townsend, J., & Sons

**PROPRIETARY ARTICLES**

American Drug Stores  
Anglo-American Drug Co.  
Ashton & Parsons, Ltd.  
Atkinson & Barker  
Barclay & Sons, Ltd.  
Battle, Son & Maltby  
Beecham, T.  
Beiersdorf, P., & Co.  
Box, W. H.  
British Drug Houses, Ltd.  
Capsuloids (1909), Ltd.  
Christy, T., & Co.  
Coleman & Co., Ltd.  
Congreve, G. T.  
Cox, A. H., & Co., Ltd.  
Curry, Henry  
Daggett & Ramsell  
Daisy, Ltd.  
Davenport, J. T., Ltd.  
Day & Sons (Crewes), Ltd.  
Day, Son & Hewitt  
Denoual, J., & Co.  
Edwards, W., & Son  
Elliman, Sons & Co.  
Evans Sons Lescher & Webb  
Faulding, F. H., & Co.  
Fellows' Syrup  
Fennings, Alfred  
Ferris & Co.  
Fulford, C. E., Ltd.  
Goodall, Backhouse & Co.  
Grapelax, Ltd.  
Guy's Tonic Co.  
Henry, T. & W.  
Himroda Asthma Cure  
Hovenden, R., & Sons, Ltd.  
Hughes, E. Griffiths  
Ichthyol Co.  
International Chemical Co.  
Iron-Ox Rem. Co., Ltd.  
Kay Bros., Ltd.  
Kutnow, S., & Co., Ltd.  
Lalor's Dr., Phosphodine  
Lambert Pharmacal Co.  
Lofthouse & Saltmer  
Lorimer & Co., Ltd.  
May, Roberts & Co.  
Menley & James, Ltd.  
Newbery, F., & Sons, Ltd.  
Odol Chemical Works  
Owbridge, W. T., Ltd.  
Peddy Co.  
Powell, Thomas, Ltd.  
Resinol Chemical Co.  
Sangers'

Savresse's Capsules (Evans)  
Schimmel & Co.  
Scott & Bowne, Ltd.  
Squire & Sons  
Standard Tablet & Pill Co.  
Stedman's Teething Powders  
Thompson & Capper  
To-Kalon Mfg. Co.  
Tunbridge & Wright  
Wilcox, Jozéau & Co.  
Zotos, Ltd.  
(See also DENTIFRICES AND TOILET ARTICLES)

**PULVELLÆ**

Warrick Bros.

**PULVERETTES**

Oppenheimer, Son & Co., Ltd.

**PUMPS**

Berkeley Filter Co., Ltd.

**QUININE AND SALTS**

Boehringer, U. F., & Soehne  
Howards & Sons, Ltd.  
Pointet & Girard.

**RAPE OILS**

Hull Oil Mfg. Co.

**RAZORS**

Auto-Strop Safety Razor Co.  
Gillette Safety Razor, Ltd.  
Hovenden, R., & Sons, Ltd.

**RENNET**

Fulwood, R. J., & Bland  
Oldfield, Pattinson & Co.

**RESINS AND RESINOIDS**

Allen, S., & Sons, Ltd.  
Allen & Hanburys, Ltd.  
Morson, T., & Son  
Ransom, W., & Son  
Smith, T. & H., Ltd.

**RESPIRATORS**

Zimmer & Co.

**RUBBER GOODS**

Davol Rubber Co.  
Burge, Warren & Ridgley, Ltd.  
Evans Sons Lescher & Webb, Ltd.  
Fecher, M. J.  
Galen Mfg. Co.  
Herrick, James L., & Co., Ltd.  
Haywood, J. H.  
Hovenden, R., & Sons, Ltd.  
Hutchinson Co.  
Maw, S., Son & Sons  
May, Roberts & Co.  
Wanklyn, H. A.  
Warne, W., & Co., Ltd.

**SACCHARIN**

Saccharin Corporation, Ltd.

**SALICIN**

Macfarlan, J. F., & Co.  
Smith, T. & H., Ltd.

**SAMPLE CASES**

Keane, Thomas

**SANTONIN**

Smith, B. A., & Co.

**SAPONIN**

Field, C. W.  
Sthamer, Dr. R.

**SAUCES**

Goodall, Backhouse & Co.  
SCALE PREPARATIONS

Morson, T., & Son

**SEA SALT**

Tidman & Son, Ltd.

**SEA-SICKNESS REMEDY**

Zotos, Ltd.

**SELTZOGENES**

Actors, Ltd.

**SERUMS AND ANTITOXINS**

Allen & Hanburys, Ltd.

Evans Sons Lescher & Webb  
Parke, Davis & Co.

Schimmel & Co.

Wilcox, Jozéau & Co.

**SHARES**

McAdam & Tuckniss

**SHEEP-DIPS**

Burt, Boulton & Haywood

Sanitas Co., Ltd.

Tomlinson & Hayward, Ltd.

**SHOP-FITTING**

Ayrton-Graham, Ltd.

Bowling & Son

Evans Sons Lescher & Webb, Ltd.

Josephs, P., & Son

Maw, S., Son & Sons

Mills, H.

Parnall & Sons, Ltd.

Ruddick & Co.

Sangers'

Southall Bros. & Barclay, Ltd.

**SOAP MATERIALS**

Chiris, Antoine

Flora Chemical Works, Ltd.

**SOAPS**

Allen & Hanburys, Ltd.

Armour & Co., Ltd.

Breidenbach & Co.

Bronley, H., & Co., Ltd.

Cheesbrough Mfg. Co., Ltd.

Cook, E., & Co., Ltd.

Erasme Co., Ltd.

Hull Oil Mfg. Co., Ltd.

Lescol Perfumery Co.

Oakey, J., & Son, Ltd.

Pearls, A. & F., Ltd.

Price's Patent Candle Co.

Shaw, Henry & Co.

Wright, Layman & Umney

Yardley & Co., Ltd.

**SOAP, MEDICATED**

Armour & Co., Ltd.

Bronley, H., & Co., Ltd.

Calvert, F. C., & Co.

Faulding, F. H., & Co.

Lambert Pharmacal Co.

Wright, Layman & Umney

**SOCKS**

Davis, J. M., & Sons

**SODA FOUNTAINS**

British Automatic Aerators, Ltd.

**SODIUM BICARBONATE**

Brunner, Mond & Co., Ltd.

Howards & Sons, Ltd.

Mumford, G. S.

**SOYA OIL**

Hull Oil Mfg. Co.

**SPARKLETS**

Aerators, Ltd.

**SPECTACLES**

Botwright & Grey

Darton, F., & Co.

Maw, S., Son & Sons

Nitsche & Günther

Raphael's, Ltd.

**SPHYGMOMETERS**

Hicks, J. J.

**SPIRIT OF WINE**

Burrough, J., Ltd.

Preston's Liverpool Distillery

**SPITTING-FLASKS**

Maw, S., Son & Sons

**SPONGE BAGS**

Maw, S., Son & Sons

Schutze, F., & Co.

Toogood, W., Ltd.

**SPONGE STANDS**

Wanklyn, H. A.

**SPONGES**

Cresswell Bros. & Schmitts

Internl. Sponge Importers

Kent, G. B., & Sons, Ltd.

Maw, S., Son & Sons

Sangars'

**SPONGES, RUBBER**

Wanklyn, H. A.

**SPONGIO-PILINE**

Whitehead, R. R., & Bros.

**SPRAYERS**

White, E. A., Ltd.

**SPRAYS**

Burge, Warren & Ridgley, Ltd.

Cook, Alfred, & Co.

Davol Rubber Co.

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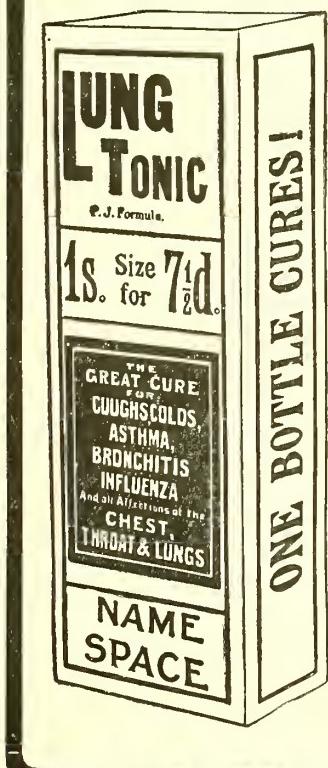
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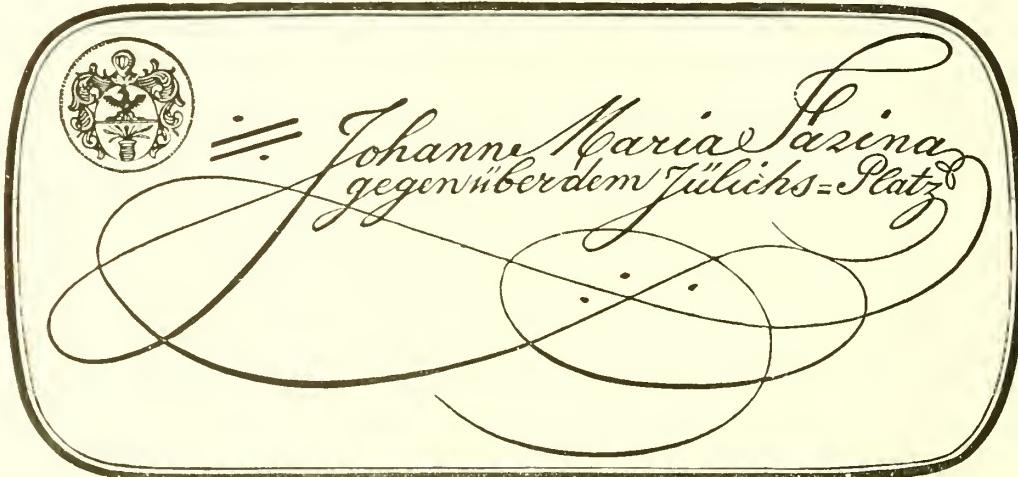
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# JOHANN MARIA FARINA, GEGENÜBER DEM JÜLICH'S-PLATZ, COLOGNE.

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The above is an exact facsimile of my registered Label. Owing to the many close imitations of this, intending purchasers of Eau de Cologne should closely examine the label of every bottle, compare it with the one shown here, and note carefully **the address: Gegenüber dem Jülich's-Platz, in addition to the name Johann Maria Farina.**

I would point out that I am the manufacturer of the "**Genuine**" Eau de Cologne, and **the only Firm that has continuously and uninterruptedly** produced Eau de Cologne from the receipt of the inventor since 1709. During this time—**200 years**—the business has been carried on at the same address, viz.: **Gegenüber dem Jülich's-Platz**, by a direct descendant of the founder of my firm without a break.

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Packed in 10 lb. and 20 lb. Tins, and 1 lb.,  $\frac{1}{2}$  lb., and  $\frac{1}{4}$  lb. Bottles.  
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International Exhibitions—London, 1862; Chicago, 1893. Prize Medals awarded for Pharmaceutical Extracts, Essential Oils, and Dried Herbs of superior Quality. Also Award at the Paris Exhibition, 1867.

# Essential Oils "Sachsse"

## Terpene- and Sesquiterpeneless.

HIGHEST CONCENTRATION. BEST QUALITY IN THE MARKET.

Guided by the conviction that even the best commodities need some testimony as to their merits, we venture, in the following brief account, to direct your attention to our specialities, which appear to us destined to play a leading part in the Essential Oil industry. We refer to our

### Terpeneless and Sesquiterpeneless Essential Oils "Sachsse."

#### I. What is aimed at in the production of Terpeneless and Sesquiterpeneless Oils ?

It is a very general opinion among experts that essential oils embody the odiferous or aromatic principle of the vegetal material from which, by distillation, expression or extraction, these oils are derived. This view is erroneous. It is more correct to state that only part of the constituents of an essential oil embody the aroma of the respective raw material, the remainder being indifferent or at any rate of less value as regards aromatic properties. As an example may be cited the delicately scented flavouring principle of lemon peel; this is not the **essential oil of lemon** itself but only a small fraction of it, as a matter of fact only some four or five per cent. of the total. This means that 95 or 96 per cent. of natural oil of lemon is quite unimportant as regards scent and flavour! In the case of **oil of orange**, only one or two per cent. are thus active, the remaining 98 or 99 per cent. being to all intent and purpose ineffective. The same applies to a greater or less extent to almost all the essential oils. It is only in quite isolated and exceptional instances, as, for example, the essential oil of bitter almonds, that the essential oil as a whole embodies the aromatic and flavouring principle of the vegetable substance.

**Which then**, from this point of view, are the active substances in Essential Oils and which the inactive?

Science furnishes an answer to this question: it is almost invariably the oxygen-containing chemical compounds which have the characteristic smell and taste of an essential oil, while, in the same manner, it is almost invariably the oxygen-free compounds which form those portions which are indifferent or of inferior value in these respects. A simple example of this may again be cited: in **Oil of caraway** the active aromatic constituent is an oxygen-containing chemical body, i.e., Carvol, while the indifferent constituent is an oxygen-free compound, a terpene called Carvone. Whereas the oxygen-containing bodies found in essential oils are reenriched from a numerous class of chemical compounds, the further discussion of which here would lead us too far afield, the oxygen-free constituents belong chiefly to only two classes, viz. to the terpenes and the sesquiterpenes.

Thus, the importance of the designation "terpene- and sesquiterpeneless essential oils" will be readily understood: they are essential oils which have been freed from all constituents which are indifferent or of inferior value as regards aroma and flavour; in other words, they represent the pure odiferous and aromatic principles of the vegetable kingdom released from all unimportant contaminations.

#### II. What properties are possessed by the Terpeneless and Sesquiterpeneless Essential Oils "Sachsse"?

The removal of the terpenes and sesquiterpenes naturally results in an increased richness of the oil thus refined; this is the case with the various essential oils in a degree proportionate to the amount of terpenes and sesquiterpenes present in the natural oil. For example, the increased richness or degree of concentration of **terpene- and sesquiterpeneless oil of lemon "Sachsse"** is twenty-five fold, i.e., one part of this oil corresponds to twenty-five parts of the natural oil of lemon. This high degree of concentration results from the circumstance, already mentioned, that natural oil of lemon contains only four or five per cent. of active substances.

Accompanying this greater concentration of terpene- and sesquiterpeneless essential oils "Sachsse" is to be found **greater delicacy of aroma**, since it is perfectly clear that **an essential oil must gain in delicacy of aroma in proportion as the odourless and tasteless constituents are removed**.

A further and very important advantage of the "Sachsse" essential oils is their **great stability**. It is, as a matter of fact, the terpenes in essential oils which, under the action of air and light, become resinous, whereby the delicacy of aroma of the oil is irretrievably impaired. A noteworthy exception to this rule is formed by the **terpene- and sesquiterpeneless oil of juniper "Sachsse."** This oil undergoes changes under the action of air and light in a very short time, and the only, but absolute certain remedy against the occurrence of this change is the solution of the quite freshly prepared terpene- and sesquiterpeneless oil in alcohol. The solution thus formed can be kept indefinitely. We therefore always recommend the keeping of oil of juniper "Sachsse" in alcoholic solution.

The particular property of our terpene- and sesquiterpeneless essential oils, upon which we pride ourselves, and which has raised them well above the level of all competing ones, is that **their very great solubility in dilute alcohol**. The great majority of our oils are soluble in the proportion of 1, 2 or 3 of 69% (about 23 overproof) alcohol; **dilute alcoholic solutions of them are soluble in water!** This high degree of solubility is the criterion of their absolute purity and of the complete absence of terpenes and sesquiterpenes, for, in addition to their other inconvenient properties, terpenes and sesquiterpenes possess that of being but little soluble or completely insoluble in dilute alcohol. For this reason even a trifling percentage of terpenes and especially of sesquiterpenes will be betrayed by diminished solubility in alcohol of the respective product. Ready solubility in dilute alcohol is the touchstone which our products will withstand but upon which, without exception, competing products may dash to pieces.

Finally, as regards the economic aspect of the use of our terpene- and sesquiterpeneless essential oils, **their cost**, thanks to our perfected methods of production, is so low that their use in the place of natural essential oils constitutes a pecuniary advantage.

#### III. How are Terpeneless and Sesquiterpeneless Oils "Sachsse" used?

Upon this subject, naturally, only information of a general character can be given; this, however, in view of the wide range of application they enjoy in consequence of their great solubility in alcohol, will be found quite sufficient. **The degree of concentration** represented by each of the terpene- and sesquiterpeneless essential oils as compared with the natural oils is stated in optimum values in our price list. The possibility is thus afforded of employing our terpene- and sesquiterpeneless essential oils in the place of the corresponding natural oils. Very dilute spirit may be used for dissolving our Oils. Thus, in the majority of cases, 100 parts of 60% (about 7 overproof) or often even of 50% (about 11 under-proof) spirit suffices for the solution of one part of the Oils. Detailed information on the subject of the solubility of our oils is likewise to be found in our price-list. It is easy to convince oneself of their water-solubility by preparing a 1% solution of any one of the oils in 60–70% alcohol and pouring a small part of this solution into ordinary water; the essence forms a clear solution without sediment and will be found to render the water intensely aromatic.

We should not omit to add to our previous remarks the assurance that only first-class natural oils form the raw material of our terpene- and sesquiterpeneless essential oils "Sachsse." As a matter of fact, the manifold experiments which we have been able to make in the course of the evolution of these oils have only served to place us in the position of being able to make use of nothing but the finest varieties of natural oils. The advantages offered to consumers by the uniform quality and richness which characterise our terpene- and sesquiterpeneless essential oils will, we trust, be the means of securing your patronage.

Yours faithfully,

E. SACHSSE & CO., Leipzig (Germany).

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"We have been extensively advertising "NICOSIA" in the principal periodicals and magazines to create an interest which should lead to Chemists receiving inquiries for this speciality."

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is  
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FOR HALF A CENTURY  
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## The Best Essential Oils

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1 doz. 6d. free (for counter display)	-	-	-				
Free samples, showcards, etc. ....	-	-	-				
Carriage Paid ...	<u>£</u>	<u>0</u>	<u>10</u>	<u>6</u>			
					<u>£</u>	<u>1</u>	<u>4</u>
							0

## **REPEAT ORDERS.**

BUYING PRICE.	£	s.	d.	SELLING PRICE	£	s.	d.
3 doz. 6d. tins at 3 6 doz....	0	10	6	3½ dozen at 6d. ....	1	1	0
½ doz. 6d. free (for counter display)	-	-	-				
Free samples, showcards, etc. ....	-	-	-				
Carriage Paid ...	<u>£</u>	<u>0</u>	<u>10</u>	<u>6</u>			
					<u>£</u>	<u>1</u>	<u>1</u>
							0

# **EUCRYL TOOTH POWDER.**

*To be obtained from all the Principal Wholesale Houses, or direct from The Proprietors,*

**EUCRYL LIMITED, HULL.**

Stock the articles which your customers require—and will ask for again. Among these

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## **Carbolic Tooth Powder**

occupies, of course, a prominent position all over the world.

And there is a good demand too for the other specialities, Carbolic Soaps, Ointment, Disinfectants, &c., made by F. C. Calvert & Co., Manchester, England.

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In Pots and Collapsible Tubes, 6d. and 1s. each.  
SOLD BY ALL WHOLESALE HOUSES.

Special Terms for £5 from the Proprietors—  
**W. WOODS & SON, Chemists, PLYMOUTH.**

Woods' Areca Nut Tooth Powder, containing all the properties of the Paste, in 6d. and 1s. Tins.

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**CORNS**

### **ROSALINE**

THE CELEBRATED CURE FOR  
**SOFT and HARD CORNS**

7½d. and 1/- per bottle.

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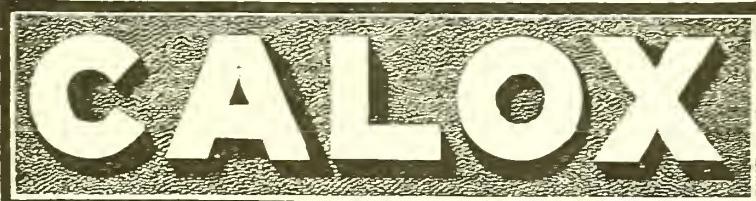
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The number of dentifrices is myriad, their names are legion,

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### THE OXYGEN TOOTH POWDER.

Its principle is the evolution of oxygen.

Its efficiency as a cleanser of the teeth is due to the oxygen which it generates when used.

*Not only antiseptic, but deodorant, two desirable properties of a tooth powder. Its oxidizing and deodorizing power was obvious in our experiments.—THE LANCET, London, Eng.*

*Possesses not only strong antiseptic, but deodorizing and oxidizing properties, as the result of which the teeth, after a few days' use of CALOX, acquire a pearly whiteness.—THE CHEMIST AND DRUGGIST, London.*

CALOX is entirely different from other dentifrices. Its introduction marks a decided advance in the scientific development of a dentifrice, a fact which the dental profession the world over has been quick to recognise. Chemists should interest themselves in Calox because only a chemist can explain the peculiar virtues and value of an oxygen-producing dentifrice.

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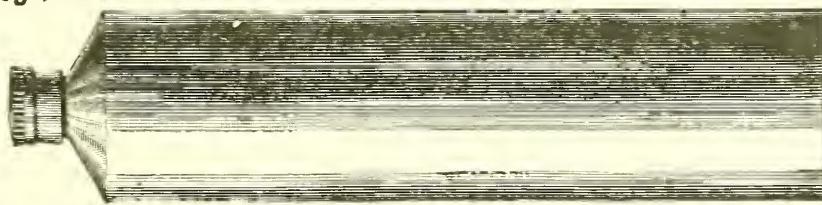
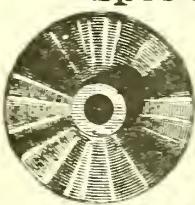
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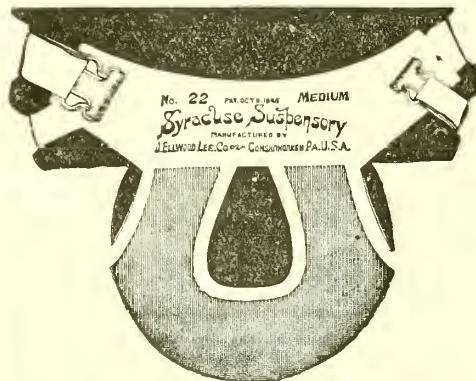
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ROWLANDS' TOILET ARTICLES have been known for the last 120 years as the purest and best preparations for the Hair, Skin, and Teeth that have ever been made. They are largely advertised all over the world, consequently there is always a regular demand for them, and they should therefore be kept in stock by all stores, chemists, and druggists.

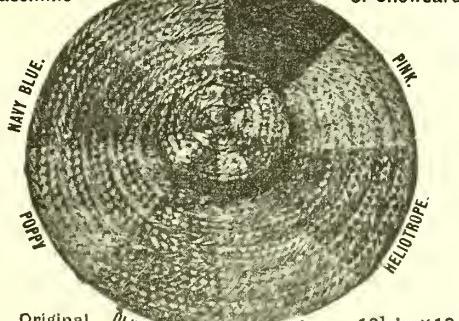
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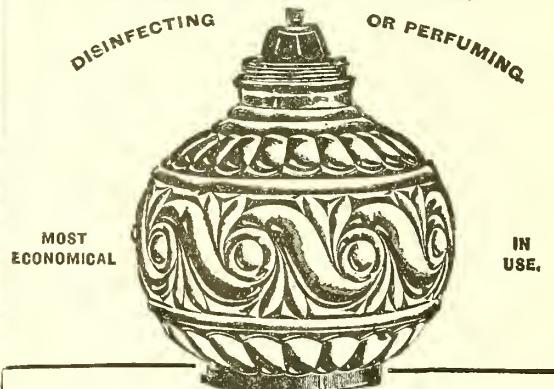
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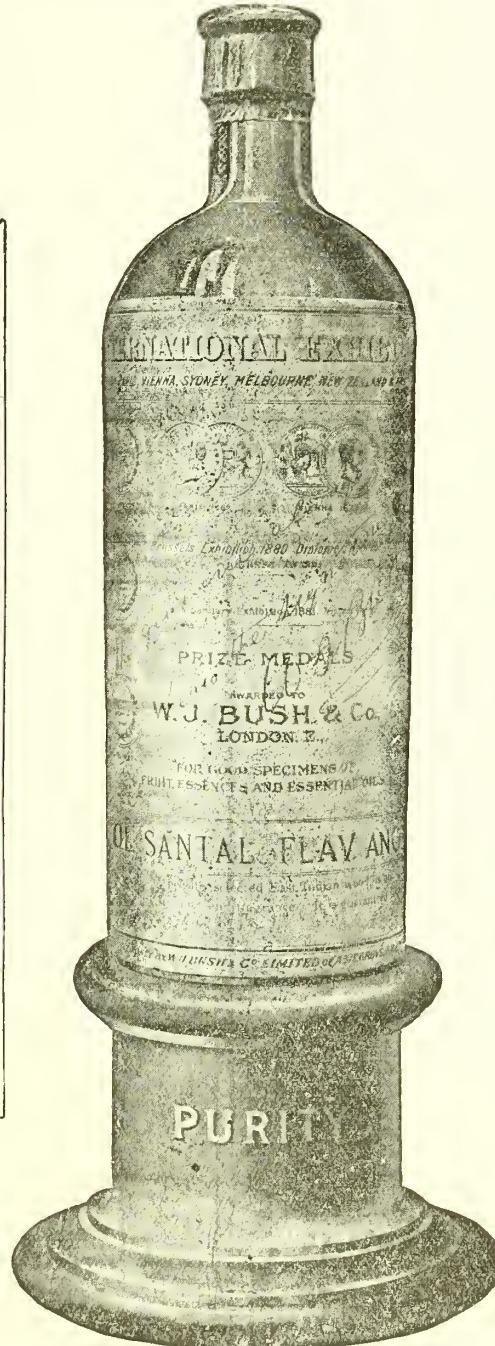
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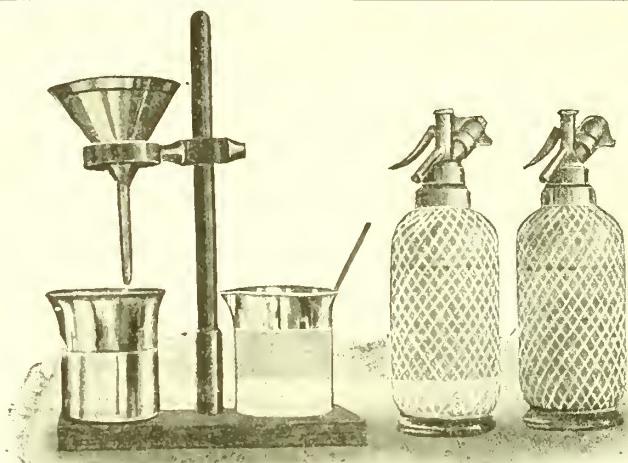
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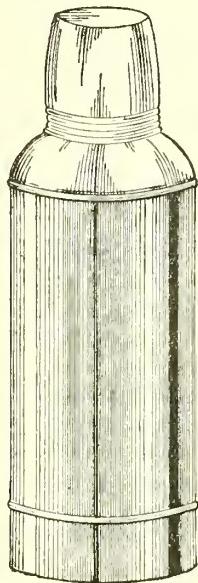
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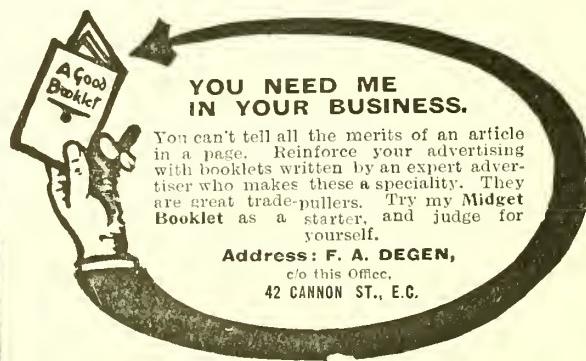
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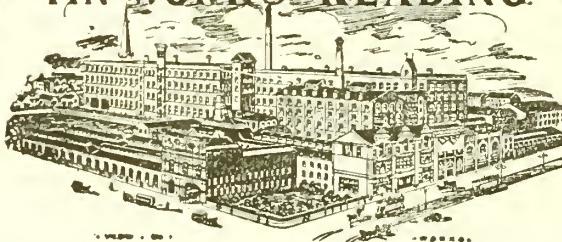
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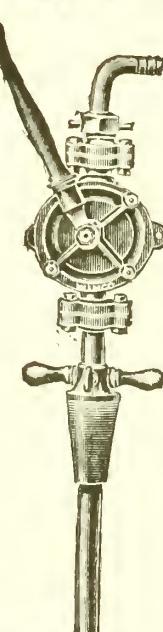
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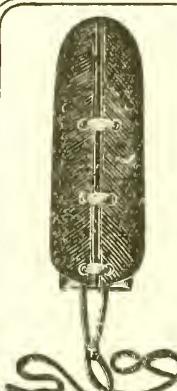
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**FORTY-TWO**

**YEARS'**

**EXPERIENCE.**

## Summary of the Week.

#### Agri-Horticultural Poisons.

We seem to be approaching a halt in the efforts of unregistered people to get licences under the new Act, and the news goes into small compass this week (p. 360). We learn that there is a general neglect of the statutory conditions of sale among licensees (p. 364).

#### British Association.

The annual meeting of the British Association opened at Winnipeg on Wednesday, when Sir J. J. Thomson delivered a presidential address on recent advances in physics (p. 375).

#### Colonial and Foreign News.

Mr. Nathan Mercer, of Montreal, is dead (p. 367).

A French pharmacist has been murdered by his porter (p. 365).

We give further information regarding celluloid manufacture in Japan (p. 365).

At a meeting of Kimberley chemists last month there was an interesting discussion on klipsweet (p. 365).

Orange River Colony is considering the duties on spirituous medicinal preparations with a view to fostering Colonial manufacture (p. 366).

The American Pharmaceutical Association met at Los Angeles, Cal., last week, and devoted the greater part of five days to serious business and the sixth day entirely to pleasure (p. 367).

#### Correspondence.

Half a dozen pages in this issue are occupied by letters to the Editor, dispensing notes, and replies to queries. The letters begin with one by Mr. John C. Umney showing the need for revisional investigation of Indian podophyllum, and this is followed by letters on such topics as sweet oil, stocktaking, store prices, P.A.T.A. prices, and apothecaries' assistants. The section begins on p. 384.

#### Customs and Excise.

Sir T. E. Thorpe, Principal Chemist of the Government Laboratory, has submitted to the Treasury a report on the work of his Department during 1908-9, which is fully summarised in an article beginning on p. 373.

This should be carefully read by all in the chemical and drug trade, since it shows what articles are liable to chemical examination on importation, and deals very fully with spirituous medicinal and flavouring preparations and the use of methylated spirit. The more important statistics are fully quoted, as well as the Principal Chemist's remarks on them.

#### Home News.

Eight official reports with reference to drug adulteration and inspection are summarised on p. 362.

The "Times" statement that application has been made to revoke eighteen saccharin patents is belated; the matter has been heard and disposed of in favour of the Saccharin Corporation (p. 361).

Apart from the usual news of poisoning fatalities, we report half a dozen inquests in the course of which matters of interest to chemists were mentioned—e.g., condemnation of medicine stamp-duty by Dr. Waido (p. 362).

As a result of the recent death of a lady who was shampooed with carbon tetrachloride in Harrod's Stores the hairdresser and his assistant have to answer charges of manslaughter, and we report the evidence given so far (p. 363).

#### Legal and Parliamentary.

The most important law report refers to a claim made by a porter against Boots, Ltd., for injuries. He had been paid while off work, and the defendants paid an additional sum into Court, which was accepted. We give particulars of seven new registered companies (p. 368).—The House of Commons has passed the Cinematograph Bill, but others have been abandoned for the Session (p. 372).

#### Trade Matters.

Although price-fluctuations are few, there is more buoyancy about the chemical and drug markets. Opium continues a rising market. Reports are current as to much higher prices for santonin should the projected monopoly in wormseed materialise. Glycerin is very firm. Italian castor oil, turpentine, and juniper-berries are dearer. Shellac is lower. The feature of the first-hand drug-auction was the demand few new-crop Tinnevelly senna (p. 361).

## Corner for Students.

Conducted by Leonard Dobbin, Ph.D.

### SUMMER CONTRIBUTIONS.

#### The Microscope for the Young Pharmacist.

By J. C. Shenstone, F.L.S.

##### III.

WHEN the student has familiarised himself with the appearance of starch granules, he cannot do better than proceed to practise the arts of section-cutting and of mounting, both of which are required in studying vegetable histology, and are therefore essential for the microscopic study of drugs. Material for sectioning requires to be prepared in advance, and during the summer months portions of stems, roots, leaves, and flowers of suitable plants should be placed in a preservative mixture of equal parts of industrial alcohol and water (using at least 100 times as much of the preserving-fluid as material). Properly prepared material can be purchased at small cost of the British Botanical Association, York, but more knowledge is gained of this important preliminary to making sections by the student doing it himself, while the practice thus gained will stand him in good stead on future occasions. The sunflower, elder, and maize supply plant-tissues of an instructive nature, and a glance through elementary text-books on botany will suggest other material.

It is usual to make a start in section-cutting by hand—aided by any kind of sectioning instrument or microtome—as hand dexterity is essential in microscopic practice. Small objects, such as seeds, may be held in a hand vice, but stems and roots can be held firmly between the thumb and first finger of the left hand. Leaves are usually placed for sectioning, either singly or in packets of several, between the two halves of a piece of carrot or of elder pith. It is important in making the section to keep both the surface of the material and the razor moistened with water or, if preserved material is used, with the preserving-fluid. In special cases, where the material would be affected by water, glycerin may be used. The first sections are usually discarded, as the surface has generally suffered in dividing the material. A thick section which is thrown away will suffice to smooth the surface. Thin sections should be aimed at. Also, since tissues can be studied better from thin incomplete sections than from thicker complete sections, it is more desirable to commence cutting with the razor resting upon the surface to be operated on, rather than by starting at the outer surface, the support supplied to the razor aiding in securing thin even sections. If the whole outer surface is required, the material can be embedded in carrot or elder pith. Many sections should be cut, the best ones, so to speak, being obtained when the operator has got into the swing. Those most suitable for examination can be picked out on sight or by inspecting under a low magnification.

A rigid strap is preferable to a strap for stropping the razor, as the latter gives a rounded edge instead of the acutely angled cutting-edge desirable for section-cutting. To cut a section the razor is held firmly in the right hand with the elbows supported against the operator's sides, but leaving each hand free) and drawn across the material away from the operator. Practice alone will give the free action essential to produce a good section, and the student will evolve devices of his own to secure that desirable end. More perfect sections are obtained with greater ease by the use of the microtome. The hand-microtome usually consists of a circular plate on which to rest the razor and a tube (to hold the material), which is affixed below the central aperture of the supporting stage. A piston, raised by a fine screw, works in the tube. The material for sectioning is wedged firmly, but not too tightly, in the desired position in the tube and its surface smoothed. A complete or partial retraction of the milled head working the screw raises the material slightly above the stage and, with a sharp razor and a steady hand, thin complete sections are readily obtained. Exceedingly thin sections are usually secured by mechanical microtomes, using material embedded in paraffin wax or other medium. The more primitive method of

sectioning by hand is well adapted to the pharmacist's requirements, and excessively thin sections are not always the best for the purposes of identification. The student should also make for himself some dissecting-needles. A few twigs of privet,  $\frac{1}{4}$  in. in diameter or slightly larger, will suffice for handles, the natural roughness of the bark providing a better grip than a polished handle. The eye ends of needles of various sizes are pressed into portions of twig about 3 in. long until the needle is embedded for about half its length. The dissecting-needles are finally dried in a slow oven. It will be found useful for dissecting-purposes if some of the larger needles are ground on a stone to produce a knife-edge.

To isolate the constituent cells of a tissue, a mixture of nitric acid containing a few grains of potassium chlorate is used to dissolve the original common wall or middle lamella. A few small fragments of the tissue are placed in a wide test-tube (or other suitable vessel) and gently heated until gas begins to be evolved. The tube is placed aside until the tissue readily teases apart with the dissecting-needles. The bleached appearance of the fragments usually indicates this stage. Soft tissues are rapidly destroyed, while refractory woody tissue may require a more prolonged treatment, and even re-heating. The heating of the mixture must be carefully watched, as the evolution of gas is so sudden when heat is applied too rapidly that the whole of the corrosive contents will be projected out of the tube. In any case the mouth of the tube must be directed away from the operator. The operation should not be conducted in the same room as the microscope on account of the chlorine gas attacking the brass mountings. To examine the treated tissue it is washed with a little water by successive decantation and the cells separated by teasing out small portions with the dissecting-needles.

Dissecting-microscopes (of low power and provided with arm-rests) are made to overcome the difficulty of the reversed image of the object on the compound microscope, but a little practice will overcome this difficulty of reversed motion and save expense. A few blocks of wood will serve as arm-rests if support is desired.

The preparation of permanent slides will be the subject of the next "Corner."

## Agri-Horticultural Poisons.

Subscribers and others would oblige us by sending information with reference to applications. Copies of newspapers containing the advertisements of applicants would also be esteemed.

### Consideration of Applications.

CARDIGANSHIRE.—The Health Committee of the County Council has decided in favour of refusing two applications.

### Applications Granted.

MONMOUTHSHIRE.—The County Council has acceded to the requests of all the applicants for poison-licences.

TYRONE.—Crawford & Wilson, Omagh, and Elliott & Sons, Coagh—general merchants.

### Interesting Items.

A correspondent (Mr. A. P. Hunt) to the "Torquay Directory" of August 11 comments on the recent discussion *re* poison-licences by the Torquay Town Council (*C. & D.*, August 7). He says:

The Alderman-florist goes before a committee and gets leave to advocate the case of florists. When the resolution of the committee comes before the Council for consideration the Councillor-chemist naturally expects a similar opportunity; but his floral opponent actually raises an objection to him as an interested party. . . . be it noted, the floral Alderman had himself been doubly out of order. . . A minor point may be that though the Alderman-florist was interested, the Councillor-chemist was not—*i.e.*, if he neither stocked nor intended to stock horticultural weed-killers and insecticides.

SYNTHETIC CAMPHOR.—The British Consul at Helsingfors, Finland, reports that a factory has been erected at Taimionkoski for the production of synthetic camphor, the price of which, however, fell during the year, so that the profits did not amount to what was anticipated.

## English and Welsh News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

### Brevities.

The Royal Colleges of Physicians and Surgeons have acquired a site in Queen Square, Bloomsbury, London, W.C., for the new examination-hall. The building on the Victoria Embankment has been sold to the Institution of Electrical Engineers.

The African Entomological Research Committee has been appointed by the Colonial Office to study the relation between certain insects and the propagation of diseases in Tropical Africa. The Committee consists of experts in entomology and tropical diseases.

On August 20, in the Court of Criminal Appeal, Hausmann, Moser, and Schmidt appealed against a conviction for smuggling saccharin (see *C. & D.*, July 24, p. 108). The Court dismissed the appeals, holding that they had no jurisdiction, as the cases were not criminal proceedings.

The Board of Agriculture and Fisheries are sending notices to growers of potatoes that under the Destructive Insects and Pests Order of 1908 it is the duty of the grower to report to the Board all outbreaks of warty disease or black scab (*Chrysophyctis endobiotica*) on their premises.

Frederick Spencer, described as an unemployed chemist's assistant, appeared before the Southampton County Bench, on August 20, for allowing his three children to become chargeable to the South Stoneham Union. The case was adjourned to afford accused an opportunity of paying the expenses incurred.

The London District Council of the National Amalgamated Union of Shop Assistants, Warehousemen, and Clerks is bitterly disappointed with the Shops (No. 2) Bill, and has arranged for a demonstration in Hyde Park on Sunday, October 3. A procession will be formed on the Victoria Embankment at 2 P.M.

An Order in Council, gazetted on August 20, empowers the General Council of Medical Education and Registration of the United Kingdom to confer on the registered practitioners resident in England and Wales the power of returning an additional member to the General Council, but the addition in question is not to be made until the next ensuing general election of direct representatives.

The Local Government Board have extended the application of the Infectious Disease (Notification) Act, 1899, to the disease known as *ophthalmia neonatorum* (purulent conjunctivitis) in the five pottery towns of Burslem, Stoke-on-Trent, Longton, Newcastle-under-Lyme, and Fenton. The step is in the direction of reducing infantile blindness by rendering notification of the disease compulsory.

The Horticultural Society established by the employés of Messrs. Ferris & Co., Bristol, held another successful show recently. The awards were as follows: Stocks (six blooms, any variety), Mr. W. W. Welch; asters (twelve blooms, any variety), Mr. A. Hemming; kidney beans, Mr. J. Bennett (1) and Mr. W. Maggs (2). The members of the Society visited Frenchay on August 21 to view the beautiful grounds of Mr. Belfield.

At the East Riding Court, at Hull, on August 17, Alexander Voss, of Hull, and George Edward Hart, chaufeur, were charged with being in possession of about 400 lb. of saccharin at Ferriby upon which, it was alleged, the duty had not been paid. It was found that the duty had been paid on the night of the arrest, and the men were accordingly discharged. It is suggested that Mr. Voss, who is an employé of the Saccharin Corporation, seized the saccharin, which had been surreptitiously imported, in the ordinary course of duty. The Magistrate remarked that the Excise authorities were justified in making the arrest, as the saccharin had been found in a very curious place.

### The Saccharin Patents.

The "Times" on August 25 had an article on the manufacture of saccharin which began by stating that an "ap-

plication has been made at the Patent Office to revoke eighteen patents relating to the manufacture of saccharin," and then referred to the importance of the case. The information was somewhat belated, as the application has been disposed of, and costs have been awarded to the Saccharin Corporation, the applicants not being able to prove their case to the satisfaction of the Comptroller.

### Birmingham Notes.

On all sides it is heard that your Jubilee Number was the best ever produced. The past history of so powerful a trade hebdomadal is exceptionally interesting.

Messrs. Hedges, cash chemists, Dale End, have just had a new shop front put in. It is semi-circular in the entrance, and has been most effectively done, greatly improving the appearance of the shop.

There will be a general flutter for the post of Poor-law dispenser in this city. It is disturbing the daily round of managers of multi-pharmacists' shops, ladies in institutions, head-men at high-class pharmacies, and even laboratory directors are in the running.

Curiously enough, the Press did not record that the local Pharmaceutical Association was represented at the Newcastle Conference, although a well-known pharmacist was its delegate. The omission (not the reporter's fault) is to be remedied in the "Year-book."

A Sparkhill tradesman who has two shops at some distance apart has trained a dog to do messages between the two places, and the plan worked very well until the recent hot weather, when the animal was found at home one day, basking in the sun, with a message tied round his neck.

The "Staffs Weekly Sentinel" has an article on the diseases affecting the agricultural world which must stimulate the trade in copper salts and other insecticides. The writer suggests the addition of treacle to the Bordeaux mixture—not a new idea—and insists on the purity of the copper sulphate, giving a test for the detection of such impurities as are commonly met with in the cheaper forms of "blue stone."

### Sheffield Notes.

The authoritics of the Jessop Hospital have decided to appoint a male dispenser on the staff and to abandon the system which has been in operation for over thirty years, by which all dispensing has been done by a local pharmacist.

A number of local chemists have taken advantage of the new Act to change their sign-title to "pharmacist," and one or two have gone to the trouble of exhibiting a card explaining the meaning of the change. One of the best-known and respected of the older generation of pharmaceutical chemists has gone one better by describing himself as "Major Pharmacist."

A meeting of the organisers of the proposed company to deal in chemists' own specialities was held in Sheffield on Thursday, August 26, for the purpose of settling the final details preliminary to registration as a company. It is proposed to start in a small way, and the registered capital will probably not in the first instance exceed 2,000*l.*, which is somewhat over the amount promised.

In the course of alterations to the Vestry Hall of the old township of Sheffield, now in progress, an old minute-book of the overseers has been unearthed which gives particulars of the terms of appointment of a medical officer for the workhouse in 1763. The appointment was styled that of "surgeon and apothecary," and the conditions were that the officer should "give his attendance in all cases physical and surgical, to perform all 'operations,' attend all accidents, assist difficult labours, salivate, cure all 'venerials,' etc., for the yearly 'salary' of twenty-seven pounds, and to have no by bills."

### Contracts.

Blean (Kent) Rural Council.—Walker & Harris, chemists, Sun Street, Canterbury, and Jeyses' Sanitary Compounds Co., Ltd., for the supply of disinfectants.

The Admiralty.—Brunner, Mond & Co., Ltd.; P. Windmuller & Co., Ltd.; United Alkali Co., Ltd.; C. Tennant, Sons & Co., Ltd.; and Chance & Hunt, Ltd., for the supply of chemicals.

## Coroners' Inquests.

A brush-manufacturer, named Thomas Booth Johnson (48), died at Canonbury, London, N., recently from the effects of taking two Seidlitz powders and three black draughts. He suffered from diseased conditions of the heart, lungs, and liver.

During the course of an inquest on an infant at Hackney Coroner's Court it was mentioned that the child was given a red cooling powder, which was bought at a chandler's shop. There was no evidence that the powder did any harm. The mother explained that she went to the chandler's shop because the chemist's was so far off.

A Southwark jury on August 21 found that the death of John W. A. Ames (72), at the Southwark Reception House on the previous day, was due to carbolic-acid burns, but that there was no evidence to show how the burns were caused. The deceased was found dead in a bath, and an attendant deposed that no carbolic acid or other disinfectant was added to the water.

At the resumed inquiry held by the Shoreditch Coroner (Dr. W. Wynn Westcott) into the death of James Barry (71), carpenter, Dr. F. Gowland Hopkins deposed that he could find no trace of corrosive poison. It was stated that death was due to consumption. A son of the deceased had accused his married sister (who was employed by Mr. W. C. Plumer, chemist and druggist, 60 Lamb's Conduit Street, W.C., as housekeeper) of administering poison to deceased in a glass of brandy. The housekeeper (Mrs. Julia Currier) stated in her evidence that it was untrue to say that she had access to the poisons and stock of Mr. Plumer's shop. A verdict of death from natural causes was returned.

The Cheltenham Deputy Coroner (Dr. A. A. Dighton) held an inquiry at Great Rissington into the death of Samuel Botter (86), retired farmer, who was one of a family who were taken ill in consequence of drinking some water. The Deputy Coroner stated that analysis revealed the presence of arsenic in the water. The deceased's son, a farmer, deposed that the water was drawn from the pump and used for making tea, and that the whole family were taken ill with sickness and diarrhoea during the night. The water-tanks in the field had no cover, but no sheep-dipping had been done on the farm that year. Dr. F. R. S. Corser said he suspected mineral poisoning from the symptoms of the sufferers. Deceased was very feeble, and some irritant he had taken caused collapse. The Deputy Coroner advised the jury that it was a case for adjournment in order for a *post-mortem* examination and further analysis of the water to be made. The jury were of opinion that there was no need for further inquiry, and returned a verdict of "Death from senile decay, accelerated by exhaustion following a severe attack of diarrhoea."

At the inquest held by the Southwark Coroner (Dr. F. J. Waldo) on August 21 regarding the death of the infant son of a Camberwell bus-driver, it was stated that death was due to "status lymphaticus," and a verdict of "Natural Death" was returned. In her evidence the mother stated that she had given the child a teething-powder, which elicited the following condemnatory remarks from the Coroner: "The powders are a quack and secret remedy, and the Government reaps a very rich harvest from these secret preparations and remedies, or nostrums. The powders have a Government stamp on them, and the Treasury gets many thousands a year out of them—wrongly, I think. The Government does not think so, however."—At another inquiry by Dr. Waldo, at Southwark on August 24, Dr. Waldo had occasion to comment as follows upon the remark by the mother of the deceased infant that she had given the child "a teething-powder because it had diarrhoea": "These secret remedies are largely advertised, and the people who make them reap a rich harvest. In one year Government got 240,000/- from patent-medicine stamps, and I think the stamps do a lot of harm, because poor and ignorant mothers think that, the Government stamp being on it, the medicine must be good." Death was due to suffocation, and a verdict of death from misadventure was returned.

## Sale of Food and Drugs Acts.

No samples of drugs were taken for analysis in Greenwich during the past year.

In Hackney, during 1908, six samples each of camphorated oil and paregoric were analysed and found to be genuine.

In Deptford last year two samples each of ammoniated tincture of quinine and glycerin were analysed and certified as genuine.

The Woolwich analyst examined the following samples during the past year: Ammoniated tincture of quinine, 3; camphorated oil, 2; tincture of iodine, 2; paregoric, 2. All except one sample of camphorated oil were genuine.

The Standing Joint Committee of the East Suffolk County Council has decided not to take up for the present the suggestion of the county analyst that samples of medicines made up from prescriptions be taken under the Acts.

The Wimbledon analyst examined the following samples during the last year: Tartaric acid 4 (2); citric acid, 4 (1); cream of tartar, 2 (1). The figures in parentheses denote the number of samples certified as slightly inferior or deteriorated.

The Bedfordshire analyst reports that the following samples were taken during the past year: Cream of tartar, 6; carbonate of soda, 6; flowers of sulphur, 5; citric acid, 3; cod-liver oil, 3; camphorated oil, 2; beeswax, 1; boric acid, 1; carbonate of magnesia, 1; citrate of magnesia, 1; crushed linseed, 1; compound liquorice powder, 1. All were genuine with the exception of one sample of "cream of tartar," which consisted of bicarbonate of soda, and another of "carbonate of soda," which proved to be cream of tartar.

The Islington medical officer (Dr. A. E. Harris), in his annual report, gives a *résumé* of the drug-analysis in the district during the last eighteen years. During that period 719 samples, representing 59 different kinds of drugs, were examined. Of these 613 were returned as genuine. A full list of the samples, with the totals of adulteration, is included, and in his comments Dr. Harris states that "there are many articles which it seems almost a waste of time, energy, and money to sample. Nevertheless, some of them, if not analysed, would soon be adulterated, as they had been in former days." During 1908, ninety-one samples of drugs were examined, as follows (the figures in parentheses relate to adulterations): Lime-water, 14 (6); ammoniated tincture of quinine, 10 (1); iron pills, 7 (2); pepein, 7 (6); sweet spirit of nitre, 7; cream of tartar, 7 (1); compound tincture of camphor, 7 (1); prescriptions, 7 (2); hydrargyrum cum creta, 7; fluid magnesia, 7 (3); tincture of quinine, 4; liquor iodi fort., 2; liniment of iodine, 2; iodine ointment, 2; tincture of iodine, 1. Summonses were issued in the case of six pepsins certified not up to standard, but were withdrawn owing to the unsatisfactory character of the pharmacopœial test. The samples were from 25 to 79 per cent. deficient in strength. An ammoniated-quinine sample was 34 per cent. deficient in ammonia. Of the prescriptions one was slightly deficient in mercuric chloride and another 48 per cent. deficient in iron. Three samples of fluid magnesia were 63, 75, and 80 per cent. respectively deficient in active ingredient, while two samples of iron pills were 32 per cent. short of the standard for ferrous carbonate. A sample of lime-water contained only a half of the proper proportion of lime, and one of cream of tartar contained 0.0175 per cent. of lead. Benzoic acid was present in slight excess in a sample of compound tincture of camphor.

## Disinfection.

The Deptford medical officer states in his annual report that 1,532 rooms and 11,618 articles of clothing, bedding, etc., were disinfected during the year. Disinfecting-fluid is supplied gratis where required. Seven premises, consisting of eight rooms, were also fumigated as being verminous, and 270 books collected from infected houses were sterilised before returning to the Public Library.

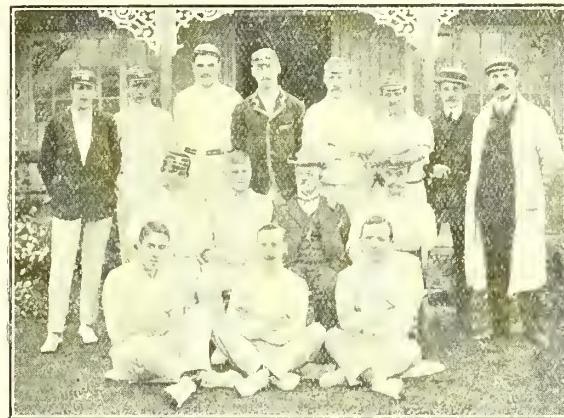
The Woolwich medical officer (Dr. Sidney Davies) states in his annual report that disinfectants are supplied by the Department for treating infected soiled linen, infected stools, sputa in phthisis, and for personal use in

infectious disease, the cost in 1908 being 45*l.* 14*s.* The disinfectants used were corrosive sublimate, formalin tablets (for fumigation), formaldehyde (for spraying, disinfecting books, and for use in the mortuary), cylin (for sputa in phthisis), permanganate of potassium, coarse earabolic (for dust-pails), and chloride of lime (for offal-tins).

#### Crikket.

Leicester Pharmacy Athletic Club.—Three matches have been played this month, the club losing two and winning one, the latter making the tenth win out of fifteen matches played this season.

Aldersgate C.C. v. Gresham H. C.C.—The former team, drawn from among the employés of Messrs. S. Maw, Son & Sons, of Aldersgate Street, London, E.C., met the second eleven of Messrs. I. & R. Morley, of Gresham Street, in the final for the Junior Championship Cup of the City of London Athletic Association, at Lee, on August 21. A well-contested match was won by Maw's team by 44 runs, but the result was in doubt until nearly the close of the match. Aldersgate, who batted first, compiled a total of 61, only Abbott (26), Dixon (13), and Cross (12) reaching double figures. Gresham replied with a score of 55. On batting a second time the Aldersgate eleven obtained 67 runs (Fox 15, and Whitehead 22 not out). The Gresham team thus required to score 74 runs in sixty-five minutes to secure the victory, but Wells and Dixon dismissed them for 29. Wells obtained twelve wickets for 52 runs in the course of the match and Dixon eight for 21. Abbott, being the highest scorer, secures the bat offered by Messrs. Spalding. The Aldersgate eleven have had a successful season, winning thirteen matches, losing five, and drawing two. This is the second time that the Aldersgate team have won the Cup, the former occasion being just ten years ago, in 1899.



Our photograph shows the winning team, the names being as follows : *Top row* (left to right), Messrs. E. Webster (scorer), A. Cross, D. T. Dixon, E. Wells, C. Flower, G. Abbott, W. Waller (reserve), C. T. Smythe (umpire); *Middle row*, Messrs. A. Sherburn, W. Whitehead (capt.), A. Coombs (hon. secretary), W. Haylock; *Bottom row*, Messrs. F. Smith, A. Fox, and H. B. Carey.

#### Carbon-tetrachloride Shampoo.

At the Westminster Police Court on August 24, charges of manslaughter were brought, at the instance of the Public Prosecutor, against Mr. William Henry Eardley, departmental manager, Harrod's Stores, and Miss Beatrice Clarke, assistant, in connection with the death of Miss Dalrymple after a dry shampoo with carbon tetrachloride (*C. & D.*, July 17, p. 90). Mr. Leycester said the case for the prosecution was that this process was of a most dangerous nature, performed by the use of a most dangerous substance, and one that required skill in the use and administration of it; that the defendants both knew that it was a dangerous substance, that Clarke, who used it, had none of the requisite skill or knowledge to use it, and that the defendant Eardley was the person who put her in a position to do what she did. Counsel outlined the shampooing process, during which about half

a pint of the highly volatile fluid was used (the charge being half-a-crown as against eighteenpence for an ordinary shampoo). An electric fan served to remove the vapour from the cubicle. The *post-mortem* examination disclosed the fact that the deceased had symptoms of a condition known as "status lymphaticus," which increased the likelihood of sudden death, and the assistant did the very worst thing possible when she laid the unconscious lady on the floor of the cubicle among the heavy vapour of the carbon tetrachloride. No precautions had been taken, but no precautions would justify the use of this dangerous chemical as a hair-wash. The two defendants, according to their own evidence, were absolutely unskilled in the use of carbon tetrachloride, and absolutely ignorant of its real nature. He therefore submitted that the case was one the Magistrate would send to a jury.—Professor A. J. Pepper deposed that he witnessed an illustration of the shampooing-process on a female assistant. Her face became pale and the lips had a distinct cyanotic stage, indicating the vapour had some effect on the heart. The fan was inefficient as regards removing the fumes from the cubicle.—The examination of the witness was not concluded, and the further hearing was adjourned until September 2.

#### Fires.

Damage to the extent of 6,000*l.* was caused by fire at the distillery of the British Alcohol Syndicate, Ltd., at Wharf Road, Canning Town, London, E., on August 19.

A serious fire occurred on August 19 on the premises of Mr. Mr. W. Watts, chemist and druggist, Forest Row, Sussex, the interior being practically burnt out. The damage, estimated at 250*l.*, is covered by insurance.

#### Police-court Cases.

At the Wigton Police Court on August 17, James Newall, hawker, was fined 2*s.*, and costs, for working a horse in an unfit condition. In his defence the accused stated that he was only following out the instructions on the box of ointment which he obtained from a local chemist in order to treat the sores. The directions included, "Be sure and work the horse."

At Bow Street Police Court on August 17, an elderly man, named Gerald Graham, described as a commission agent, was remanded on a charge of obtaining 250*l.* by false pretences from Mrs. Florence Westwood, widow, Mecklenburg Square, London, W.C. It was stated that accused, who told the prosecutor that he is a chemist, obtained the money to patent and put on the market a "lady's sanitary towel," but it was discovered that he had only lodged a provisional specification.

At Exeter on August 18, the charge against the girl Dorothy Gladys Collard, of stealing toilet-requisites from the Market Street stores of Messrs. Holman, Ham & Co., chemists, was dismissed (*C. & D.*, August 21, p. 329). The charges against a gardener, named Walter J. Scopes, and his wife also fell to the ground in consequence. The girl Collard's parents and her elder married sister, Victoria Lilian Halse, were committed for trial, bail being allowed. The younger sister, when charged with the offence, stated that Mrs. Halse, who was formerly employed by Messrs. Holman, Ham & Co., had stolen the articles found beneath her bed. It was said that Mrs. Halse agreed that the statement was true. Mr. McGahey, for the prosecution, during the case against the elder sister, said that when accused was asked if she had anything belonging to the firm she produced goods which included the proceeds of some entirely purposeless thefts, such as twenty-one babies' comforters, bottles of gravy-colouring, and a bottle of chlorodyne. During the charge against the parents, Mr. McGahey averred that their house was found to be what could only be described as a dépôt of stolen goods, and it contained enough drugs to stock half-a-dozen chemists' shops. There were piles upon piles of things stored from basement to roof. It was clear that articles must have been brought to the place almost daily. The Bench decided as stated above.

**TAHITI VANILLA.**—The exports from the Society Islands during 1908 amounted to 173 tons, valued at 27,765*l.*, against 141 tons, valued at 23,257*l.*, in 1907—an increase of 32 tons in quantity and a decrease of 492*l.* in value.

## Irish News.

**Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.**

### Appointments.

The Directors of the Dublin Civil Service Guild have made the following additional appointments : Graham's Medical Hall (for the Dolphins Barn district) and Mr. William Jones, pharmaceutical chemist (Phoenix Park district), for dispensing prescriptions, at 35 $\frac{1}{3}$  per cent. off list price. Proprietary medicines are also subject to a discount.

### Aerated-water Workers Fined.

At Belfast Summons Court on August 20, several employees of Messrs. Cairns & Co., aerated-water manufacturers, Landseer Street, were prosecuted by the factory inspector for having failed to wear face-guards and gauntlets which their employers provided for them. Fines of 7s. 6d. or 5s., and costs, were imposed in each case.

### Pharmaceutical Education.

In addition to the schools mentioned in the Educational Number, there is Mr. Templeton's new School of Chemistry, The Gables, Botanic Avenue, Belfast. At this school full courses of instruction for the Pharmaceutical Licence examination begin on September 20 and on January 3. Fees : General physics and chemistry, 17. 1s.; practical chemistry, 4l. 4s.; botany and materia medica, 2l. 2s.; pharmacy, 1l. 1s. There are also classes for the Pharmaceutical Preliminary, Assistant's, and Druggist's Licence examinations.

### Personal.

Sir William Whitla has been appointed Professor of Materia Medica to the Belfast University, and Mr. V. G. L. Fielden, pharmaceutical chemist, demonstrator in materia medica and pharmacy.

A long account of the marriage of Mr. W. B. Conyngham and Miss Biggs, of Bantry, on August 12, has appeared in the local papers. After the marriage at the Mariners' Church, Kingstown, Mrs. Biggs, the bride's mother, held a reception in the Royal Mail Hotel, where luncheon was served. The happy couple received over 120 presents, including a solid silver salver from the directors of Benger's Food, Ltd., whom Mr. Conyngham represents in the United States. Mr. and Mrs. Conyngham are passing their honeymoon in Scotland, and sail to-day (August 28) for New York. Their home is to be in Plainfield, N.J.

### Guardians' Doings.

The Local Government Board have written to the Cavan Guardians regarding the small amount of drug-samples submitted to the analyst. The doctors were instructed to forward larger quantities.

The Mohill Guardians have been informed that some of the drugs received at the dispensary arrived damaged through being badly packed. The damaged goods are to be returned to the contractors.

Messrs. Boileau & Boyd, Dublin, contractors to the Baltinglass Guardians, have written further in regard to the empties which they complain have not been returned. The empties at the various dispensaries are to be collected by the carrier when next drugs are delivered.

The Belfast Board of Guardians on August 24 were investigating the reason for what was considered an excessive amount of liquor morphine hydrochloridi used in the North Queen Street dispensary. An interesting letter was read from the dispenser, in which it was stated that during July 273 prescriptions containing the liquor were dispensed, the quantity in each being 2 drachms.

## Scots News.

**Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.**

### Aberdeen and the North.

Mr. James Milne, J.P., chemist, Midmar, is purchasing an aerated-water factory in Dundee on behalf of his son, Mr. J. A. Milne, who is also a pharmacist.

Mr. Frank Crossling, horticultural chemist, Justice Street, Aberdeen, had a stand at the annual flower show of the Aberdeen Royal Horticultural Society, which was held in the Duthie Park last week. He showed plant-fertilisers, chemical manures, insecticides, etc., all being his own preparations.

It is expected that the committee of the local Pharmaceutical Association will at its next meeting discuss the agricultural poisons question. There is a strong feeling that the Pharmaceutical Society could have stopped the granting of some of the licences by interdict. Inquiries throughout the county indicate that many of the licensees are unfamiliar with the law as regards the sale of poisons, and some are deliberately or unconsciously violating it. This matter may also be considered.

### Edinburgh and District.

Burglars effected an entry, during the early hours of August 19, into the premises of Mr. G. B. W. Archer, chemist and druggist, Station Pharmacy, Eskbank. The intruders were evidently disturbed, as practically nothing was missing.

Georgina Gray, or Smith, a respectably dressed woman, was put under caution for six months at the police court last week. There were forty charges against her, including one preferred by a city chemist (*C. & D.*, July 17, p. 73). Her method was to enter a shop, make a purchase, and, giving a false name and address, say that she would send the money over in a few minutes.

### Fifeshire.

A correspondent who has visited several towns in Fife-shire lately states that in many places the chemists' shops are as handsomely fitted now as those in the larger towns. The number of photographic materials stocked is in marked contrast with the conditions existing only ten years ago.

The busy main street of Cowdenbeath is a revelation to the visitor on a Saturday evening, when the miners and their wives and children flock into the town from the surrounding villages. The five well-appointed pharmacies in the thoroughfare are not neglected in the progress of the family shopping.

## French News.

(From the "C. & D." Paris Correspondent.)

**REFORM OF THE PHARMACEUTICAL CURRICULUM.**—M. Garnal, Cahors, asks why some provincial Schools of Pharmacy, where the number of pupils is very small, should not be fused with the local Faculties of Sciences, which, as a rule, have too many scholars in proportion to the number of their professorial staff. He points out that the licentiate of sciences might imply the possession of the three certificates—general chemistry, analytical chemistry, and natural history ; while a fourth and special certificate (pharmaceutical diploma) could be gained by the pharmacist by an additional course of study.

**AMERICAN TARIFF.**—There is a good deal of opposition and resentment in France against the new United States Customs tariff, official copies of which are now being circulated. The particular goods which form the bulk of the French exports to the United States are among those which are the most heavily penalised. It is estimated that the duties on French goods landed in America will amount to nearly 300,000L more than under the former tariff. Articles of perfumery, which form an important part of the French export trade, are among the articles affected, toilet-soaps being now rated at 50 per cent. *ad valorem*.

**MEDICAL ETHICS.**—A curious tale is told by the "Petit Parisien" of a Parisian doctor who was called at a few days' interval to visit two dying children. He asked to see the prescriptions of his colleague who had treated the cases, and found one ordered a large dose of digitalis and the other an equally formidable quantity of opium. Fearing some slip of the pen, he said nothing to the parents, but made inquiries at the pharmacy. The pharmacist assured him that the doctor in question was in the habit of prescribing these large doses for children—so much so that he (the pharmacist) only used a third or a quarter

of the quantity prescribed in making up the mixtures. The doctor accordingly warned his *confrère* of the grave danger of such exaggerated doses. The prescriber replied curtly that he knew what he was about and had no need of counsel. Should such a doctor be allowed to continue his practice? was the point submitted to the Society of Legal Medicine by Dr. Sireday. The discussion did not result in any common agreement as to the course to pursue.

**PHARMACIST ASSASSINATED.**—M. Bourrillier, pharmacist, 56 Rue des Bourguignons, opposite the railway station at Bois-Colombes, was found murdered in the cellar of his house on the morning of August 24. Bois-Colombes is a pleasant suburb of Paris, where resides a colony of British residents. M. Bourrillier had been a few doors from his pharmacy to purchase a morning paper, but shortly after he had returned to his pharmacy customers were unable to get served. This went on for some time, until, finally, the police were called, and found the proprietor dead in the cellar, and by his side the shop porter in an unconscious condition. A glove was found stuffed into the porter's mouth, but he was soon restored to consciousness, when he explained that on going down he was attacked by a person whom he did not see. The marks on the neck of M. Bourrillier indicated that he had been strangled. Under police examination the porter afterwards confessed that he had attacked his master during a quarrel regarding the disappearance of wine from the cellar. It may be added that M. Bourrillier suffered from heart-disease. He was about fifty years of age, and took over the pharmacy some years ago from M. Guinger, whose name still appears on the facia.

## India and the East.

(From the "C. & D." Correspondents.)

**PROPRIETARY MEDICINES IN INDIA.**—In the course of the annual report on the trade of Calcutta for 1908-9 the Collector of Customs states that "even patent medicines, of which India consumes astonishing quantities, felt the pinch of bad trade, and the imports declined by over a lakh." To some extent, says the Collector, "this was due to the revived popularity of local concoctions, but the prevailing depression also affected the sale of what is an article of luxury to many classes."

**POTASSIUM CHLORATE.**—Japan has hitherto relied upon foreign countries for potassium chlorate, and the amount imported has been large. A project was once mooted in Japan to produce chlorate, but as the cost of the home article was 26 sen per catty, against 18 sen for the imported article, the project was abandoned. Now Mr. Nakajima, a Kyoto expert, is to manufacture it electrolytically, and it is said that preparations are being made to establish a company in Tokyo with a capital of 400,000 yen.

**TECHNICAL DELEGATES.**—Dr. Mizuno, senior counsellor of the Japanese Home Office (according to the "Oriental Physician"), has published a remarkable statement pointing out that Japanese delegates hitherto despatched to international scientific conferences had been loosely selected. Some of them, he states, received the nomination for personal convenience and a few of them did not understand technical terms even. He urges that the continuance of such loose nomination will badly affect Japan's reputation in international scientific circles.

**PROPRIETARIES IN MANCHURIA.**—The sale of inferior proprietary medicines by dishonest Japanese merchants in 1906 greatly affected the market which was opened in Manchuria after the Russo-Japanese war, but the efforts since made by respectable firms to establish a footing have proved successful. Japanese proprietary medicines imported through Tairen (Dalny) during 1908 amounted in value to 183,123 yen, against 48,851 yen in 1907, and since January last the imports continue to increase. Endeavours are being made to extend the market to Mongolia.

**SALICYLIC ACID AND SAKE.**—The use of salicylic acid as a preservative in sake is to be prohibited in Japan from September 30, 1911. It appears that the brewers are opposed to this prohibition, alleging that even now it is difficult to ensure the keeping of sake held in stock by them for any length of time, notwithstanding the use of the maxi-

mum amount of salicylic acid permitted by law. The brewers have presented a petition setting forth their views, and the Finance Minister, fearing that the prohibition of the use of the acid might lead to a falling-off in the quantity of sake brewed, and that the Government revenue would suffer a decline, is said to be in favour of granting the petition, but the Minister for Home Affairs insists on the prohibition as arranged.

**CELLULOID-MANUFACTURE.**—In last week's issue (p. 333) we indicated briefly the progress of the celluloid-industry in Japan. We now learn from a recently issued Kobe Consular Report that the imports of celluloid in its various forms into Japan during the past four years have been as follows :

	1905 Yen	1906 Yen	1907 Yen	1908 Yen
Total imports ...	496,865	828,122	320,696	668,315
From Germany... 446,542	636,597	265,912	530,513	
From Gt. Britain 47,775	157,791	47,535	119,909	

The general duty on celluloid is 25.60 yen per 60 kilos., and on celluloid goods the duty is 40 per cent. *ad val.*; the imports of the latter in 1907 being valued at 15,800 yen, and in 1908 at 32,600 yen. Of the raw material required to manufacture celluloid (cellulose, camphor, and sulphuric acid), the two latter are obtained in Japan and are very cheap. It is this fact, in combination with the growing demand in East Asia, which has suggested the establishment of celluloid-factories to be worked with Japanese capital. The Japanese Celluloid and Artificial Silk Factory is the principal concern. It has a nominal capital of from one to two million yen, one-quarter of which has been paid up, and one-tenth of the capital is in German hands. The company will commence to manufacture celluloid, and later, as the business prospers, it will take up the manufacture of artificial silk and the chemicals necessary for the production of both articles. The technical manager (Dr. Green) is in England purchasing the necessary machinery for the manufacture of celluloid, while the machinery for the production of artificial silk will be bought in Germany. The factory will be erected at Aboshi, near Himeji, the workmen's quarters and the business premises being already completed. Two years is expected to elapse before the factory gets to work. Another concern, the Sakai Celluloid Co., is building a celluloid-factory at the town of Sakai. This company has a capital of 2,000,000 yen, of which 1,125,000 yen is in the hands of the founders. The buildings are expected to be completed by the beginning of 1910. The company has an American manager, and the daily production is expected to amount to several thousand kin. Judging by figures published in regard to anticipated output, there is going to be a large over-production in Japan, for which an outlet will be sought in other parts of East Asia.

## South African News.

(From the "C. & D." Correspondents.)

### Cape Colony.

**NEW LICENCES.**—Upon the recommendation of the Colonial Pharmacy Board, the Colonial Secretary has issued licences authorising Alexander Douglas, chemist and druggist (G.B., 1906), and Thomas John Hughes, chemist and druggist (C.C., 1909), to practise in Cape Colony in that capacity.

**NORTHERN DISTRICTS CHEMISTS' ASSOCIATION.**—A meeting was held in Kimberley on July 22, Mr. W. N. Cooper (President) being in the chair. There was a fair attendance of members. The Secretary announced that as they were unable to obtain the consent of two members of the Association to the early-closing movement it had been abandoned.—Letters were read from the President of the Cape Pharmaceutical Society asking for a copy of the rules, and stating that, as that Society had now taken rooms and intended opening a school of pharmacy in Cape Town, they intended to re-draft their rules and desired to have the fundamental principles similar to those of the other Associations, so that if in the future any amalgamation was agreed to, it could be made as simple as possible.—Mr. Parry then read Dr. Froembling's paper on klipsweet,

which had been forwarded by the author in order that the results obtained by him could be compared with Mr. Parry's. From Dr. Froembling's investigation (which was chiefly microscopical) it would appear that he is of opinion that klipsweet is a mixture of honey and the excreta obtained from the hives of a wild bee (for which he proposed the name of *Apis pygmaea*), with a varying proportion of wax and mineral matter. The specimens he examined were acid in reaction and sweet, and showed large quantities of insect remains and pollen under the microscope.—Mr. Parry, in commenting on the paper, said the result obtained by Dr. Froembling differed in several respects from his own analysis (which was chiefly chemical). The chief points of similarity were the presence of a large percentage of wax and of pollen and insect remains shown under the microscope. All his samples gave a neutral or alkaline reaction to litmus, evolved ammonia when heated with caustic potash, and had only a very slight reaction with Fehling's solution. He is still of opinion that the specimens of klipsweet examined by him were the excreta of the rock rabbit.—In the discussion which followed, the general opinion was that Dr. Froembling had probably got hold of an abnormal specimen obtained from the vicinity of a beehive; but as there has been difficulty in obtaining authentic specimens of what is sold as klipsweet and hyracium, it was suggested that a larger number of specimens should be examined before the question of identity could be finally settled.

#### Natal.

**MEDICAL CONGRESS.**—The annual meeting of the South African Medical Congress was held in Durban on August 2, when the Mayor held a reception of the delegates. The proceedings commenced on Tuesday morning in the new Town Hall. Some 200 medical men from all parts of the sub-continent attended the Conference, which was under the presidency of Dr. H. A. Dumat, of Durban.

BUSINESS IN DURBAN was very brisk all last month, owing to the number of visitors from up-country towns. No rooms have been available at any of the hotels or boarding-houses except those booked some time in advance. Chemists in general, but more especially those in the town and situated near the hotels, have been doing good business in dispensing and toilet-articles, photographic requisites also being in great demand.

#### Orange River Colony.

TENDERS are being invited for the supply of drings, dressings, etc., to the National Hospital, Bloemfontein, for which Heynes, Mathew & Co. are the present contractors. The contract is for twelve months.

**SPIRIT-DUTIES PAYABLE IN ADVANCE.**—At the July meeting of the O.R.C. Chamber of Commerce a strong protest was made by Messrs. Dunkerton (Lennon, Ltd.) and Hewitt (Heynes, Mathew & Co.) against the action of the Customs Department, who insist on importers obtaining permits and paying the duty on spirituous preparations imported from other South African Colonies at the time the goods are ordered. (See also *C. & D.*, July 31, p. 171.) The Collector of Customs, who attended the meeting, said that this course had been forced upon him by the commercial community owing to so much dutiable spirit being imported without declaration, and he was compelled to take stringent measures in order to safeguard the revenue. At the same time he pointed out that anyone could import goods to Bloemfontein in bond and so avoid any annoyance. It is well known that the Collector (Mr. H. F. Gill) has the interests of chemists much at heart, and is desirous of fostering the manufacture of these preparations in the Colony. It is stated on good authority that all the Customs regulations which most concern chemists—*i.e.*, regarding the sale and manufacture of spirituous preparations and of methylated spirit—are in course of revision, and that the alterations to be made will benefit the drug-trade of the Colony.

#### Transvaal.

**PHARMACY AND FARMING.**—A farewell social was held in the Trocadero on July 27 in honour of Mr. A. S. Smith, a past Secretary of the Pharmaceutical Society of the Transvaal, and for many years an active member on the committee

of the Society. Mr. Smith was until recently a partner in the firm of Smith, Rive & Co., Johannesburg, but has now relinquished the business to take up farming in Aliwal North district, Cape Colony. Mr. James Johnston presided over a gathering of about seventy chemists, and, in making the presentation of a tantalus to Mr. Smith and a gold muff-chain to Mrs. Smith, alluded to the fact that Mr. Smith had been associated with the drug-trade in the Transvaal for the past fifteen years, and during that time had rendered valuable services to the Society. He was now leaving to take up an entirely new business—that of farming—and he (Mr. Johnston) thought they would agree with him that it took a great deal of pluck to give up one form of business for another, especially one of an altogether different nature. He wished him every success. Mr. Smith, in a feeling reply, expressed his appreciation of their kindness and of the touching remarks that had been made. Although many thought he was venturing on an entirely new departure, he wished to mention that he was the son of a sheep-farmer and had done something in the way of farming before he became a chemist, and he was only now following the advice of many great men in going back to the soil. (Cheers.) When dispensing hospitality from the tantalus, his thoughts would go to his colleagues in the Transvaal. Mr. B. Owen Jones, M.L.A., also spoke. During the evening an excellent programme of music was rendered.

### Australasian News.

#### Tasmania.

MR. T. JAMES, the new member of the Pharmacy Board, was apprenticed at Merthyr Tydfil, South Wales, to the late Mr. Reece Thomas in 1883. On completing his apprenticeship he became a junior assistant at Knighton, and later on at Birmingham. In 1889 he left England for Victoria, but finally settled in Hobart and passed the Final examination of the Pharmaceutical Society in 1893. After spending a few years in business at Sandy Bay he was appointed dispenser to the U.F.S. Dispensary at Hobart, and has held the position for thirteen years.

#### New Zealand.

**DR. MASON'S SUCCESSOR.**—Dr. Valentine, Inspector-General of Hospitals, has been appointed Chief Health Officer in place of Dr. Mason. He was born and educated for the medical profession in England. He formerly held the position of Assistant Chief Health Officer.

**PHARMACY BOARD.**—The annual statement of receipts and expenditure shows that the income of the Board, 567*l.*, exceeded the expenditure, 435*l.*, by 131*l.*, although the examination expenses showed an increase of nearly 30*l.* on those of the previous year. The conference cost the Board 52*l.* 2*s.* The Benevolent Fund stands at 364*l.*; there have been no calls on the fund during the year.

### Colonial and Foreign News.

**THE PROPOSED GERMAN BILL** against charlatanism and the regulation of the sale of proprietary medicines is said to be so advanced that the project will in all probability be ready for presentation to the Federal Council by autumn. Negotiations are still taking place between the Ministry and the various offices concerned.

**PROPRIETARY MEDICINES IN PARAGUAY.**—A new law governing the sale of proprietary medicines comes into operation in Paraguay in December 1909, by which an authorisation obtainable from the National Department of Health will be required before sale. Otherwise they will be treated as secret remedies prohibited from sale. The formula is to be plainly printed on the label of the receptacle, indicating the quantity of active substances which the compound contains, and makers and dealers are allowed six months in which to comply with this law.

**ITALIAN IMPORT-DUTIES.**—Certain modifications of the Italian Customs Tariff have been made by which the duty on citric acid has been raised from 25 lire to 50 lire per 100 kilos.; borax, from 4 to 5 lire; boric acid, from 5 to 7 lire;

acetic acid (98 per cent.), from 20 to 22 lire, other strengths in proportion; acetone, from 30 to 40 lire per hectolitre. Lactic acid has been reduced from 25 to 15 lire per 100 kilos. The internal tax on the production of pure acetic acid and on the rectification of impure acetic acid has been modified.

**INTERNATIONAL DENTAL CONGRESS.**—This Congress opened in the Reichstag building at Berlin on August 23. Among the 2,000 delegates are fifty from the United Kingdom. The British Dental Association was represented by its President (Mr. H. Brooks), Messrs. J. H. Mumford, W. B. Patterson, W. Guy, and W. Harrison. At the Tuesday morning session Mr. Bostock (Kidderminster) and Mr. Dreschfield (Manchester) contributed papers. An extensive exhibition is being held in connection with the Congress.

**ITALIAN PHARMACY BILL.**—The Italian pharmacists' assistants are protesting against the proposed Pharmacy Bill, though in what their actual grievance consists is not quite clear, as the new law does not abolish any of their existing privileges. It seems they desire to be admitted to pharmaceutical competitions, etc., on the same footing as the holders of pharmaceutical and chemical diplomas, and to be declared eligible "at least" for the grants of pharmacies in rural districts. The Italian pharmacist's assistant does not possess a very high qualification; a ministerial decree obtained through the "complaisance" of some one in authority excuses the assistant from the necessity of passing any but the simplest of oral tests, no inquiries being made as to previous educational qualifications.

**GERMAN CHEMICAL-INDUSTRY.**—The exports of chemicals from Germany during the first half of 1909 show that this industry has been one of the first to feel the effects of the slight revival in trade. During this period the exports of chemicals amounted to 13,237 tons, valued at 14,293,350L, as against 11,707 tons, valued at 12,711,400L, in the first half of 1908—an increase of 13 per cent. in quantity and 12.4 per cent. in value; the slight reduction in the latter being due to the fact that prices have only increased in a few cases in chemical products. This the "Berliner Tageblatt" attributes to the pressure of the unfavourable business situation in recent years, which has led the chemical works more and more to extend their manufacturing to the output of by-products which could yield a profit. The tendency is to offer by-products (the profits on which are said to be often the only thing which makes the sale of the main articles worth while) at cheap prices. The raw and semi-finished materials have also become cheaper, and this explains why the manufacturing works are able to carry on business at a good profit notwithstanding the low prices obtained for their manufactures.

## American Notes.

(From the "C. & D." Correspondent.)

**COMPANY PHARMACY.**—At the recent annual meeting of the New York State Pharmaceutical Association a suggestion was put forward to promote the enactment of a law prohibiting the ownership of drug-stores by corporations not composed entirely of registered pharmacists. The proposition is aimed at several large companies in the State owning groups or chains of shops—notably the Hegeman Corporation and the William B. Riker & Son Co. Nothing has so far come of the suggestion. It is feared that such a law in this country would be considered unconstitutional, and the only thing that can apparently be done is to demand that the active manager of every drug-store is himself fully licensed.

**U.S.P.**—The first bit of co-operative work which has been rendered on behalf of the United States Pharmacopœia by the Federal Government is seen in the publication of a "Digest of Comments on the Pharmacopœia," by M. G. Motter and M. I. Wilbert (see *C. & D.*, July 24, p. 119). These two pharmacists were taken into the Government service a year ago for the express purpose of doing pharmacopœial work and aiding in every possible way in the next revision of the U.S.P. In the meantime the Decennial Pharmacopœial Convention, as already announced in the *C. & D.*, will be held in Washington next May, and de-

legates are now being appointed by the State Medical and Pharmaceutical Societies. The American Pharmaceutical Association, like the State Associations, can send only three delegates. Fully fifteen of the present Revision Committee of twenty-five are members of the A.Ph.A., and would naturally like to be delegates from that organisation.

**TRUST LAW CASE.**—The J. D. Park & Sons Co., a firm of cut-rate wholesalers in Cincinnati, Ohio, brought two suits in New York State over ten years ago against certain other wholesalers, the contention being that the claimants had been prevented by the so-called "rebate" and "contract" plans from purchasing supplies freely of manufacturers and others. One of these cases was decided against the Park Co., and everybody thought the other had died a natural death. It has now been resuscitated, and the claimants have increased the sum of damages asked for from \$500,000 to \$3,500,000. The defendants are five or six large wholesale druggists in New York City, and the claim of the Park Co. is that the former have violated the anti-trust and conspiracy laws. This is a suit of great importance, and is sure to be fought to the bitter end.

**AMERICAN PHARMACEUTICAL ASSOCIATION.**—Last week the annual meeting was held at Los Angeles, and from Monday at 9 A.M. to Friday evening the officers and members had plenty of work to do, as the following programme shows :

Monday, August 16.—9 A.M., Meeting of the Council. Meeting of the National Association of Boards of Pharmacy. 3 P.M., First general session. 8 to 9 P.M., Reception.

Tuesday, August 17.—10 A.M., Second general session. 3 P.M., First session of the Section on Commercial Interests. 8 P.M., Meeting of Conference of Pharmaceutical Faculties. Meeting of National Association of Boards of Pharmacy. Second session of the Section on Commercial Interests.

Wednesday, August 18.—10 A.M., First session of the Section on Education and Legislation. 3 P.M., Second session of the Section on Education and Legislation. 8 P.M., Third session of the Section on Education and Legislation, with the Conference of Pharmaceutical Faculties and the National Association of Boards of Pharmacy.

Thursday, August 19.—10 A.M., First session of the Section on Scientific Papers. 3 P.M., First session of the Section on Practical Pharmacy and Dispensing. 8 P.M., Second session of the Section on Scientific Papers. Second session of the Section on Practical Pharmacy and Dispensing.

Friday, August 20.—10 A.M., Session of the Section on Historical Pharmacy. 2.30 P.M., Final general session. On the Saturday the members had an all-day trip to Catalina, and on each day there was something social for them and their lady friends.

## Canadian News.

(From the "C. & D." Correspondent.)

**ARSENIC AS AN IMPURITY IN DRUGS** is the subject-matter of Bulletin No. 181 of the Inland Revenue Department. The number of samples examined totalled 448, almost equally divided between magnesium sulphate, sodium sulphate, and sodium phosphate. The number of arsenic-free samples was 336, while 86 contained less than  $\frac{1}{2}$  mgm. of arsenic per 100 grams, twenty less than 1 mgm., and six (all sodium-sulphate samples) over 1 mgm.

**C.P.A.**—The annual Convention of the Canadian Pharmaceutical Association, which was held at Banff, Alberta, concluded with the election of officers, as follows : President, Henry Watters, Ottawa; Vice-President, Robert Martin, Regina; Secretary-Treasurer, J. E. Tremble, Montreal. The Convention will hold the meeting next year at Halifax. It was decided to recommend the inauguration of a correspondence course in pharmacy to assist students in acquiring pharmaceutical knowledge where colleges are not established.

**THE LATE MR. MERCER.**—The death has just occurred of Mr. Nathan Mercer, at 372 Mountain Street, Montreal, in his eighty-fourth year. The late Mr. Mercer was one of Montreal's leading drug-men in the 'sixties. He founded the firm of Evans, Mercer & Co., from which, through a limitation of partnership, he retired, accepting a position under the Government as inspector of drugs, and at the time of his death had a pension. He was one of the founders and President of the Montreal College of Pharmacy, and connected with a large number of charitable societies.

## Legal Reports.

### Sale of Food and Drugs Acts.

#### CREAM OF TARTAR.

AT Halifax on August 24, the Halifax Industrial Society, Ltd., was summoned for selling cream of tartar which contained the equivalent of  $\frac{5}{4}$  grain of metallic lead and the same of copper to the pound. A written warranty from a firm at Liverpool as "English B.P." was produced, and the summons was dismissed.

#### OLIVE OIL.

AT the North London Police Court on August 23, Clarence Williams, a general-store keeper, of Clapton, was fined 15s., and 12s. 6d. costs, for selling cottonseed oil as olive oil. The defence was that while the defendant was ill his housekeeper and shop-assistant supplied the purchaser with a pure Colonial salad oil, she thinking it better than the olive oil in stock, which had gone a little rancid. Mr. Fordham considered that this proved the case for the prosecution, and convicted accordingly.

#### County Court Cases.

##### DEBT RECOVERED.

AT Mansfield County Court on August 18, before Judge Allen, Mr. Benjamin Adams, chemist and druggist, Mansfield, recovered from H. Kelsall, 131 Gordon Road, Nottingham, 4l. 18s. 8d. for goods supplied to defendant while he was in business at Mansfield.

#### COMPENSATION TO A CHEMIST'S PORTER.

AT Rotherham County Court on August 20, before Judge Denman Benson, Walter John Butler, aged seventeen, sued Boots' Cash Chemists, Ltd., under the Workmen's Compensation Act for compensation for injuries sustained through falling down the cellar-steps at 10 High Street, Rotherham. The defendants had paid 30l. into court. It was stated that the plaintiff, while moving a box, fell down the steps, fracturing his collar-bone. He was totally incapacitated for eighteen weeks, and during that time had received compensation. Now he is at work again, and the sum paid into court was accepted by his father in final settlement of the claim. This arrangement was confirmed by his Honour.

## Gazette.

### Partnership Dissolved.

SPENCER, J., and SPENCER, H. H., essence-manufacturers, etc., Queen Street, Hammersmith, London, under the style of J. Spencer, Son & Co.

### Company Notices.

BROMO PHOSPH CO., LTD.—Meeting for an account of the winding-up at 2 the Forbury, Reading, on September 29, at 3 p.m.

GRANTHAM PHARMACY CO., LTD., to be wound up voluntarily. Liquidator, Mr. H. S. French, 4 Benet Street, Cambridge.

SAVILE TOWN CHEMICAL CO., LTD.—Before September 27, creditors to send claims to the liquidators, Mr. F. H. Lee, C.A., or Mr. W. H. Shaw, C.A., both of Dewsbury.

## Business Changes.

Properly authenticated business notices (not being advertisements) are inserted in this section free of charge if promptly communicated to the Editor.

MR. ARNOLD ROBERTS, chemist and optician, is removing from 187 High Street, Acton, London, W., to larger and more convenient premises at No. 171 in the same thoroughfare.

MR. JAMES FERRIER, chemist and druggist, has taken over the business of Mr. James McLagan, chemist and druggist, at 22 Lumley Road, Grangemouth. Mr. Ferrier had been in partnership with Mr. McLagan (who is retiring) for the last eighteen months.

MESSRS. GEHE & CO. A.-G. have removed their business to 9 Leipzigerstrasse, Dresden. The history of the company extends back some seventy-five years, and the business has during that time been carried on in the premises in the Königstrasse, which the company are now vacating.

## New Companies and Company News.

The letters P.C. mean Private Company within the meaning of the Companies Act, 1907, and R.O., Registered Office.

"A1" BOTANICAL BEVERAGE CO., LTD. (P.C.)—Capital 1,000l., in 1l. shares. Objects: As indicated by the title. R.O., Bank Chambers, High Street, Kettering.

H. M. WOOLLETT & CO. (BRISTOL), LTD. (P.C.)—Capital 1,000l., in 1l. shares (600 6-per-cent. cumulative preference). Objects: To take over the business of a manufacturers' agent and manufacturers of and dealers in toilet requisites carried on by H. M. Woollett at Bristol and elsewhere. R.O., Atlantic House, Trinity Street, College Green, Bristol.

RIDEAL LTD. (P.C.)—Capital 500l., in 1l. shares. To carry on the business of chemists, druggists, analysts, drysalters, wine and spirit merchants, experts in artificial teeth, etc. The first subscribers are G. A. Goodwin, St. Asaph Street, Rhyl, gentleman, and F. Rideal, 245 Stockport Road, Levenshulme, Manchester, pharmacist, who are also the first directors. R.O., 245 Stockport Road, Levenshulme.

WALMSLEY BROS., LTD. (P.C.)—Capital 1,500l., in 1l. shares. Objects: To take over the business of manufacturing druggists, oil-merchants, drysalters, packers, sundriesmen, herbalists and patent-medicine dealers, carried on by W. E. and T. H. Walmsley at Halifax as "Walmsley Bros." The first subscribers are W. E. Walmsley, 27 St. Bevan's Road, Skircoat Green, Halifax, druggist, and T. H. Walmsley, 40 Embsay Street, Halifax, druggist.

ELEPHANT CHEMICAL CO., LTD. (P.C.)—Capital 6,000l., in 1l. shares. Objects: To take over the business carried on by H. Harris at 174-6 Neate Street, Camberwell, as the Elephant Chemical Co., and to carry on the business of chemical, oil, rubber, disinfectant, grease and cycle and motor accessory manufacturers, etc. The subscribers are H. Harris, Fersyde, Cannonbie Road, Forest Hill, manufacturing chemist, and A. D. Harris, 8 Sudbourne Road, Brixton, S.W., manufacturing chemist. R.O., 176 Neate Street, Camberwell, S.E.

FRANCIS & CO., LTD. (P.C.)—Capital 5,000l., in 2,000 preference and 2,000 ordinary shares of 1l. each and 20,000 deferred shares of 1s. each. Objects: To take over the business of veterinary chemists and export merchants and agents carried on by H. F. Drake, C. A. G. Burgess, and G. H. Nixon at 10 Queen Street, Edgware Road, W., as "Francis & Co." and "Nixon & Co." The first subscribers are J. C. Burlingham, 36 Mark Lane, E.C., merchant; and H. F. Drake, 10 Queen Street, Edgware Road, W., chemist. R.O., 36 Mark Lane, London, E.C.

NEW PROSET SYNDICATE, LTD.—Capital 1,000l., in 1s. shares. Objects: To adopt an agreement between Schweppes, Ltd., of the one part, and E. D. Maddick and J. McLaren, of the other part, and to carry on a business indicated by the title. The first subscribers are: E. D. Maddick, Scala Theatre, W., surgeon; J. McLaren, 150 Leadenhall Street, E.C., C.A.; T. A. Riches, 106 Bargery Road, Catford, S.E., clerk; W. Firman, 5 St. Mary's Road, Westbourne Park, W., clerk; H. Slater, 33 Wellmeadow Road, Hither Green, accountant; C. W. Peacock, Nervion, Beckenham Grove, Shortlands, solicitor; and H. Brightwell, 11 Ossian Road, Stroud Green N., accountant. Minimum cash subscription, 10 per cent. of the shares offered to the public. The first directors are E. D. Maddick and J. McLaren. Qualification, 100 shares. Remuneration, 5 per cent. of the gross amounts received as royalty on the sale of Proset. R.O., 150 Leadenhall Street, London, E.C.

SOUTHALL BROS. & BARCLAY, LTD.—The Committee of Management of the Birmingham Stock Exchange have appointed a special settlement in the ordinary shares of this company for August 26, and have granted an official quotation for them. The shares, formerly held by Mr. Gilbert Southall at 28s., are now being dealt in on the Exchange at 32s. 6d.

RECEIVERS AND MANAGERS APPOINTED.—*Malvern Mineral Waters Co., Ltd.* E. Amsdon, C.A., 13 and 13A Eastcheap, London, E.C.

MORTGAGES AND CHARGES.—*Koko-Maricopas Co., Ltd.*, 1,500l. second debentures.

ACACIA GUM.—The exports of acacia from Alexandria during 1908 amounted in value to £8,822., against £18,663. in 1907 and £26,430l. in 1906. The amount credited to the United Kingdom in 1908 was £2,578l., against £10,739l. in 1907.

## Births.

**BARCLAY.**—At the Pharmacy, Glencraig, Fife, on August 11, the wife of Charles Barclay, chemist and druggist, of a son.

**HUTTON.**—At Castle Street, Brechin, on August 24, the wife of John Hutton, pharmacist, of a daughter.

**REID.**—At 37 Octavia Street, Kirkcaldy, on August 13, the wife of Alexander Reid, chemist and druggist, of a son.

**SIDEBOTTOM.**—At 217 Whalley Road, Clayton-le-Moors, on August 17, the wife of Walter Sidebottom, pharmacist, of a daughter.

**WHITE.**—At 41 Clerkenwell Green, London, E.C., the wife of David White, chemist and druggist, of a daughter.

## Marriages.

**CAMPKIN—SPENCE.**—At Willison U.F. Church, Dundee, on August 18, by the Rev. William Nelson, Percival Sidney Campkin, L.D.S., son of Mr. A. Sidney Campkin, J.P., Cambridge, to May Findlay, only daughter of Mr. John Spence, "Bon-Accord," Dundee.

**COLEMAN—BOWLER.**—At Christ Church, Belper, on August 25, by the Rev. T. C. A. Barrett, vicar, Walter Graham Coleman, fifth son of Alderman Coleman, J.P., and Mrs. Coleman, Leicester, to Lucy Jane (Jintie) youngest daughter of Mr. W. S. Bowler, pharmacist, Belper.

**CONYNGHAM—BIGGS.**—At the Mariners' Church, Kings-town, Ireland, on August 11, by the Rev. Canon O'Grady, Rector of Bantry, assisted by the Rev. Mr. Stringer, William Boulton Conyngham, Ph.C., F.C.S., second son of Mr. Henry Conyngham, M.P.S.I., to Mary Auderich, only daughter of Mr. G. W. Biggs, Ardnaseena, Bantry.

**DAVIES—DAVIES.**—At Christ Church, Higher Bebington, on August 18, by the Rev. J. R. Foster, M.A., Harold Cliffe, son of Mr. Richard Davies, Rock Ferry, to Laura Mabel, younger daughter of Mr. T. B. Davies, chemist, Rock Ferry.

**ELLIS—SLADE.**—At the Registrar's Office, Buckingham Palace Road, London, S.W., on July 24, Frederic R. Ellis, F.C.S., pharmacist, to May, youngest daughter of Mr. E. Slade, of Corsham, Wilts.

**MCHARDY—SMITH.**—At Lamb's Hotel, Dundee, on August 21, by the Rev. George R. Macphair, M.A., Dundee, assisted by the Rev. William Logan, B.D., Turriff, Alexander McHardy, chemist and druggist, Dundee, to Janey Elizabeth, elder daughter of the late Mr. Andrew Smith, Spring Cottage, Lochee.

**WAIT—MACFARLANE.**—At Rotherham, on August 11, Alexander Wait, chemist and druggist, Balbardie House, Bathgate, to Isabella Menzies Macfarlane, 36 Duncan Avenue, Scotstoun.

## Deaths.

**BRIDGEWOOD.**—On August 19, suddenly, Mr. Walter Stuart Bridgewood, chemist and druggist, manager at the Cleckheaton branch of Taylor's Drug Co., Ltd., aged forty.

**BURGESS.**—At 1 Blandford Street, Marylebone, London, W., on August 24, Mr. Frederick Augustus Burgess, chemist and druggist, aged sixty-three. Mr. Burgess was the manager of the Blandford Street business of Mr. Richard Thomas, Ph.C., 13 Upper Baker Street, London, N.W.

**FRAUSTAEDTER.**—At "Rogelim," Faure Street, Cape Town, on July 30, Mr. Adolph Julius Fraustaedter, chemist and druggist, late of Rondebosch and Wynberg. The death of Mr. Fraustaedter removes another link with the past in pharmaceutical affairs at the Cape. For many years he was in business on his own account at Rondebosch, then at Wynberg, a few miles further from the city. He retired from business about twelve years ago, and had since lived in the Gardens District, Cape Town. The tragic death of a son, who was shot by a masked burglar a year ago at the Standard Bank, Wynberg, while going to the assistance of the manager, proved a great blow to Mr.

Fraustaedter, who was greatly respected by a large circle of friends.

**ENGLISH.**—At 17 Rathgar Road, Dublin, on August 17, Mr. Thomas James English, pharmaceutical chemist. Mr. English qualified in 1885, and had worked up a good business at Rathmines. Those who attended the British Pharmaceutical Conference in Dublin in 1901 will remember Mr. English, who, as a member of the Local Committee, took a prominent part in the organisation of the local functions. He was approached some time ago with a view to co-option to the Council of the Pharmaceutical Society of Ireland, but he was obliged to decline owing to business engagements. The funeral took place on August 19, at Walhescot Cemetery, a number of pharmacists being present.

**HEATH.**—At Brondesbury, on August 23, Mr. J. H. Heath, chemist and druggist. Mr. Heath held the pro-curation for many years of the firm of Messrs. Linton, Hubbard & Andrew, 72-75 Fenchurch Street, London, E.C. He was formerly in business as a chemist and druggist. The funeral takes place at Brompton Cemetery on August 27, at 3 p.m.

**HYSLOP.**—At 244 Great Western Road, Glasgow, on August 22, Mr. George Hyslop, chemist and druggist, aged forty-two. Mr. Hyslop fractured his skull by falling from the parlour window of the house in which he resided. He had two pharmacies, one in Possilpark and the other in Newlands.

**SANDERS.**—At Upper Norwood, London, S.E., on August 18, Mr. William Josiah Sanders, chemist and druggist, aged fifty-four. The deceased gentleman was the proprietor of Carter's Drug-stores at 75 Westow Hill, Upper Norwood. He was formerly in business at Cardiff, in Tudor Road and Queen Street, and at one time acted as secretary for the local Pharmaceutical Association. Mr. Sanders, who was the eldest son of an ex-Mayor of Cardiff, had been in ill-health for some time, and submitted to three surgical operations which, unfortunately, did not prove successful. He was a kindly man, and highly respected by those who knew him.

**WHITE.**—On August 15, Mr. William Charles White, chemist and druggist, South Petherton, Somerset, aged sixty. Mr. White left Southsea about twenty years ago to take over the business of the late Mr. G. Wellington at South Petherton.

**WIEGAND.**—At Philadelphia, Pa., U.S.A., on August 10, Mr. Thomas S. Wiegand, Librarian of the Philadelphia College of Pharmacy, aged eighty-three. Mr. Wiegand was the oldest alumnus of the Philadelphia College, and one of the best-known men in American pharmacy. He graduated at the College in 1844, and a year later was appointed apothecary to the New York Naval Hospital, which post he held until 1847, when he entered into partnership with the late Frederick Brown, sen., in a retail business which Mr. Wiegand ultimately took over, carrying it on until 1866, when he entered the employment of Bullock & Crenshaw as manager of the pill-department, where he remained for sixteen years; then he purchased the retail business of the late James N. Marks in West Philadelphia. In 1885 he definitely retired from business in order to devote his whole time to the Philadelphia College of Pharmacy, which he served in many capacities; thus in 1865 he was elected President of the College, and was re-elected on five occasions—an honour conferred upon no other President. In 1880 he was appointed Secretary and Registrar of the College, which position he retained until 1900, when he undertook the lighter duties of Librarian. Mr. Wiegand's charming courtesy, his kindly nature, and willingness to draw from his wide knowledge endeared him to all who were in any way connected with the College.



MR. T. J. ENGLISH.

## Personalities.

MR. R. B. G. ROSE, pharmacist, of Toowoomba, Queensland, has sold his business there to Mr. J. F. H. Miller, and is on his way to Europe, along with Mrs. Rose.

MR. HERBERT E. BURGESS, F.C.S., has been appointed chemist and manager to Messrs. Hallams, Ltd., manufacturing chemists, Dallow Works, Burton-on-Trent.

MR. T. L. HOLLEY, chemist and druggist, the Mayor of Retford, broke all records at a meeting of the Education Committee on August 24, the business being got through in four minutes.

MR. L. CROOKALL, chemist and druggist, who is a country representative of Messrs. Sangers, Euston Road, London, was recently initiated into the Commercial Lodge, No. 1391, of Free Masonry at Leicester.

THE employés of Mr. Joseph Beecham, J.P., St. Helens, on August 21 presented a silver loving-cup to Mr. Henry Beecham, on his coming of age.

MR. ROBERT WILLIAM DENYER, of Denyer Bros., surgical-instrument makers, Melbourne and Sydney, is staying at the Inns of Court Hotel. He is passing through London on a tour round the world, accompanied by his daughter.

MR. H. WIPPELL GADD, chemist and barrister-at-law, concludes a letter to "Public Opinion" on "Parliament and Poisons" with the remark, "The licensing authorities appear to have mistaken the object of the Act, and there is reason to suppose that grave public danger will ensue."

MR. G. M. CAMPBELL, of Messrs. F. Kemp & Co., Ltd., Sydney, Australia, is now in London on a business visit, and is staying at the Charterhouse Hotel, Charterhouse Square, London, E.C., where he will be glad to receive inquiries as to Australian business, in which Mr. Campbell's firm has a wide connection.

MR. A. BARTON KENT, of Messrs. G. B. Kent & Sons, Ltd., brush manufacturers, 75 Farringdon Road, London, E.C., has just returned from a tour round the world in company with Mrs. Barton Kent, during which some 36,000 miles were covered on British territory. Leaving London

on November 14, Mr. Kent arrived in Bombay on December 4, and was immensely impressed with the enormous volume of trade in drugs in the Far East. He informed one of our staff that small shops do a wonderful amount of trade, while he understands that Butto Christo Paul's pharmacy in Calcutta sells more pharmaceutical preparations than any other chemist's shop in the world. A Calcutta chemist informed Mr. Kent that the Hindoo student of pharmacy has a very retentive memory, being frequently able to recite the B.P. off by heart. The

Chandni Chank Bazar at Delhi is a wonderful sight to see. The merchants there knew and had a welcome for Bara Sahib Kent from England. The only bristle-producing place visited during the tour was Cawnpore, but Australia produces very good horsehair. Mr. and Mrs. Barton Kent reached Melbourne on January 25. One of the chief reasons for the voyage was the foundation of a brush-factory in Melbourne in order to get inside the tariff—as Mr. Barton Kent facetiously remarked, he was taken out to Australia at the call of duty, and the Minister of Customs said, "Yes, 25 per cent. duty." The factory was established, and at the first beanfeast of the staff on March 26 Mr. Frank Tudor, the Minister of Customs at the time, was present as a guest. Satisfactory reports have since been received of the factory's progress. After journeying to Adelaide and to Tasmania, Mr. and Mrs. Barton Kent went to New Zealand, where Mr. Kent had an opportunity of congratulating Sir Joseph Ward immediately after send-

ing the famous telegram offering a Dreadnought. Mr. Kent says the bad times which had been experienced in the Dominion are over, and trade is recovering. The itinerary was resumed by returning to Melbourne via Sydney, and on June 9 the voyagers left Brisbane for Vancouver, Toronto, Montreal, and Quebec, staying at the last-named city until July 30, when the voyage home was taken to Liverpool, which was reached on August 6. During his travels Mr. Kent met many subscribers to THE CHEMIST AND DRUGGIST, and he says they all proved so charming that it would be invidious to particularise any of them. Mr. Kent, who is an expert amateur photographer, brought back many fine negatives of the interesting and famous places which he visited.

## Trade Notes.

MESSRS. BURROUGHS WELLCOME & CO. inform us that most of the aviators taking part in the aeroplane trials at Rheims carry pocket "Tabloid" first-aid cases, and the aeroplane garages are fitted with larger "Tabloid" medical equipments.

THE PRICE-LIST OF CHEMISTS' SPECIALITIES issued by the British Drug Houses, Ltd., referred to in our issue of August 21, p. 350, can be obtained from any one of the branches of the company, or from the registered offices, 22-30 Graham Street, City Road, London, N.

HAMMOND CLEANSING-PASTE.—In some copies of the C. & D. of August 21 the wholesale price of this article, produced by the Hammond Manufacturing Co., 30 St. Andrew Square, Edinburgh, was indistinctly printed. The price is 8s. per dozen. We shall be glad if subscribers will note the fact.

P.A.T.A. PRICES.—The additions to the protected list during August are: Brinka Balm; Buvo; Diamalt, with cod-liver oil; Hygienol Dentifrice; Lairitz Pine Wool articles; Laxorines; Maddock's York Rose and British Eau de Cologne; Piver's perfumes and toilet-preparations; Pond's Areca-nut tooth-paste and other specialities. The deletions are: Kukar Co.'s preparations; Trova Salts.

RUBBER PRICES.—In addition to the information regarding the advance in the prices for rubber goods which was given in the C. & D. last week (p. 354), we have since received particulars from Mr. H. A. Wanklyn, 17 Manchester Avenue, Aldersgate Street, London, E.C., who has had to advance the price of rubber sponges by 10 per cent. Etablissements Hutchinson, 70 Basinghall Street, London, E.C., announce a rise of 5 per cent. on sheetings and articles made from sheeting and 10 per cent. on solid rubber and air-proof goods. The Dunlop Rubber Co., Ltd., Manor Mills, Salford Street, Aston, Birmingham, have advanced the prices of hot-water bottles 12½ per cent. A special circular has been issued regarding hot-water bottle prices.

## Information Wanted.

Inquiries for the names and addresses of manufacturers, or other trade information, not traceable by reference to the advertisement-pages of "The Chemist and Druggist" and the "C. & D. Diary," or not filed in our private register, are inserted here free of charge. Postcard or other replies to any of the subjoined inquiries (addressed to the Editor "The Chemist and Druggist," 42 Cannon Street, London, E.C.) will be esteemed.

- 143/9. Who are the makers of "Monopole" soap?
- 144/15. Source of supply of "Grape Wine Vinegar."
- 147/21. Source of supply of "No. 58" eau de Cologne.
- 141/6. What is "Phybill," and where can it be obtained?
- 141/16. Where can "Pepanelle Dog-wash" be obtained?
- 138/44. Names of manufacturers of cotton twines for wholesale trade.
- 142/21. Makers of, or agents for, Perry & Co.'s "Andalusian Scent-tapers."
- 144/44. Address of the makers of "Pharm. Form. Capsules" marked "Dubar, Paris."

## Summer Outings.

### A Combined Trip.

THE members of the Sunderland Chemists' Association again accepted the invitation of the Newcastle-on-Tyne Pharmacists' Association to join in the annual excursion which took place on August 25. The place fixed upon was Warkworth, a fine place on the banks of the river Coquet, and near the sea. Unfortunately, for a few days the weather had been very uninviting, and this condition prevailed on Wednesday morning, having the effect of limiting the number of members who availed themselves of the outing. The train left Sunderland at 12.33 and arrived in Newcastle at 1.15, when the Newcastle section joined it, reaching Warkworth about 3 p.m. Refreshments were taken at the Hermitage Hotel, after which a stroll to the castle or by the riverside was indulged in. After an admirable tea, short speeches were given by Messrs. Foggan, Lague, Cherrett, Gilderdale, and Pescod. Music and games filled in the time until the return journey. The party reached Newcastle at 9.50.

### A Brighton Invasion.

THE twenty-sixth annual excursion of Messrs. Potter & Clarke, Ltd., took place on August 14 to Brighton. Nearly 100 of the employés of the company were present at dinner, which was served at the Unicorn Hotel, under the presidency of Mr. H. A. Potter, who was accompanied by Mrs. Potter. After the usual loyal toasts had been duly honoured, Mr. C. T. Wren (Secretary) proposed that of Potter & Clarke, Ltd., to which the Chairman briefly replied, and referred to the presence of Mr. W. Thomas of the Manchester branch. During the afternoon full advantage was taken of the ideal weather. Some of the party patronised the brakes for country drives, while others indulged in sea trips; the whole party assembling for tea later in the afternoon. After a most enjoyable day, London was reached about 10 o'clock.

## "C. & D." Jubilee.

**A FIFTY YEARS' RECORD.**—Of the many interesting numbers of our esteemed contemporary, that for July 31 is probably the most interesting. This is the Jubilee year of the paper, and the proprietors have taken the opportunity of the British Pharmaceutical Conference proceedings to make the issue for that date their Jubilee Number—although, as a matter of fact, the initial number did not appear till September 15, 1859. One of the most interesting features of the issue is a replica of the first number, which is enclosed with every copy, and which measures only  $8\frac{1}{2}$  by  $5\frac{1}{2}$  in., and embraces sixteen pages of matter and seventy-four of advertisements. It was introduced to the drug-trade by a clever firm of drug-gists' sundrymen—Morgan Bros.—who had a large warehouse in Bow Lane, Cannon Street. These talented brothers (of whom there were six) probably at first thought principally of the "fillip" which such a publication would give to their wholesale business, though it soon became evident that the paper would be able to "stand on its own legs." After the first number it had to be paid for. It is a remarkable fact that the proprietorship has remained the same until the present time, for we believe we are correct in saying that the six brothers are nearly all still alive. One of them is Sir Walter Vaughan Morgan, Bart., an ex-Lord Mayor of London. Their portraits, taken many years ago, are reproduced in group form in the Jubilee Number, and a handsomer set of "sax braw brother" one could not wish to see. Among the other interesting pictures in the number are photographs of the few retail chemists and others who were among the first subscribers. The oldest of these is Mr. J. Albright, of Lancaster, formerly of Preston, who has attained the goodly age of ninety-three. The points of interest are too many to admit of even mention in a brief notice such as this, but we should like to do one thing before concluding, and that is gratefully to acknowledge the numerous instances of kindness and courtesy which the Publishers and Editors of the *C. & D.* have extended to both the price-protection movement, as represented by the P.A.T.A. and to the Chemists' Defence Association. We heartily wish the paper and its able conductors long life and continued prosperity.—*Anti-Cutting Record.*

## The Week's Poisonings.

FIFTEEN fatalities have been recorded from poisoning during the week. In five instances the poison was taken by misadventure, and in one case spirit of salt was administered to her child by an insane mother.—Joseph Marshal (59), of Sabden, near Blackburn, committed suicide at the White Hart Inn by taking a quantity of potassium cyanide.—Charles Walder (47), Westminister, who had been a cripple all his life, took potassium cyanide with fatal effect.—Suicide while of unsound mind was the verdict returned at the inquiry into the death of Mr. Frederick A. Burgess, chemist and druggist, 1 Blandford Street, London, W., who poisoned himself by taking prussic acid. Deceased, who had suffered from nervous breakdown for some months past, had just returned from a seaside resort, where he went to seek health, but without success.—An overdose of chloral was responsible for the death of a Battersea medical practitioner, Dr. James Edward Mennie.—Mary Lazenby, the wife of a retired railway official, took crude carbolic acid for suicidal purposes at Bridlington.—Mary Gallagher (64) died in the Stockport Infirmary from the same poison taken for the same purpose.—An Irish butcher named Alexander Keith drank a quantity of carbolic acid by mistake and died shortly afterwards.—Salt of sorrel was the poison used for suicidal purposes by a Mrs. Lorimer at Ayr.—May B. Morritt (19) poisoned herself while temporarily insane by taking salt of lemon. The Coroner considered that "the Pharmaceutical Society should consider the question of the sale of salt of lemon as a strong poison, and recommend that it should be placed in Schedule 1."—Salt of lemon was also taken with suicidal intent by Ada Rosina Downs (36), domestic servant, Bristol.—Thomas Young (aged eighteen months), Oxford, obtained a cup containing some spirit of salt, which was being used by his father, a labourer, for soldering-purposes, and drank the contents with fatal results.—Jane McQuire, in a fit of insanity, administered a quantity of spirit of salt to her six-months-old baby, with fatal consequences.—Insecticide mixed with stout was the lethal agent used by Ralph Godin, a retired underwriter of Lloyd's, who resided at Loughton. Deceased suffered from severe burns, which he received six years ago in an accident with a gas-making apparatus.—Beatrice Harrington (6) died at Hindley, Lancs, from belladonna-poisoning through eating the berries of the deadly nightshade.—At the inquest on a Folkestone upholsterer named Andrew Scott it was stated that the cause of death was perforation of the intestine due to taking an irritant medicine. Deceased suffered from kidney trouble, and took a teaspoonful of some drops (instead of four drops), which, according to the medical evidence, contained oil of juniper and another constituent "which would act as a strong irritant if taken in a large quantity."

## New Books.

These notes do not necessarily exclude subsequent reviews of the works. Any of these books printed in Great Britain can be supplied, at the published price, to readers of this journal on application (with remittance) to the Publisher of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

Emery, G. F. *The Solicitors' Patent Practice.*  $7\frac{1}{2} \times 4\frac{3}{4}$ . Pp. 245. 3s. 6d. net. (Wilson, 54 Threadneedle Street, London, E.C.) [Mr. Emery presents in a handy form the legal aspects of patents, and shows what are the rights of the patented and the public. The book, which includes the changes in patent law introduced by the Patents and Designs Act, 1907, is a concise exposition of the present law of patents, and useful to anyone who has to do with patents.]

Fry, T. H. *Income-tax: Its Return, Assessment, and Recovery.*  $9\frac{1}{2} \times 6$ . Pp. 245. 6s. net. (Wilson, 54 Threadneedle Street, London, E.C.) [Mr. Hallett Fry is an authority on income-tax, and his opinions carry weight. This book gives a very readable account of this somewhat difficult subject. The chapters are as follows: (1) Income-tax forms, (2) penalties, (3) income-tax accountancy, (4) business losses and declining profits, (5) appeals, (6) earned and unearned income, (7) employer's returns, (8) succession, (9) exemptions, (10) super-tax, (11) change of rate of income-tax. There is an appendix of forms. The chapter on income-tax accountancy is particularly useful to business men; it shows the necessity of correct bookkeeping, and indicates the kind of profit-and-loss account which needs to be prepared for an income-tax statement.]

Macdonald, D. M. *Questions on Sick-nursing and Home Hygiene.*  $6\frac{1}{2} \times 4$ . Pp. 34. Paper cover, 6d. (Wright, Bristol.) [The booklet consists of questions on nursing and hygiene, to which concise answers are supplied. Dr. Macdonald is connected with St. Andrew's Ambulance Association.]

## Westminster Wisdom.

A Record of Parliamentary Progress.

### INDUSTRIAL ALCOHOL.

We are informed that it is the intention of Mr. Mitchell Thomson to raise, if possible, the question of industrial alcohol when the licensing clauses of the Budget come up for consideration.

### CINEMATOGRAPH BILL.

This Bill has passed through Committee with the omission of Clause 8, which provides that the Home Secretary may by order extend the provisions of the Act to other exhibitions involving the use of any apparatus which may be declared by the order to be dangerous.

### DAYLIGHT-SAVING BILL.

The Select Committee on the Daylight-saving Bill held a final meeting at the House of Commons on Wednesday, at which a report was drawn up setting forth the reasons why, in their opinion, the Bill is unworkable. The Bill, it may be remembered, had first place in the ballot at the commencement of the present Session. It is now dead.

### METROPOLITAN AMBULANCES.

We understand that when Sir William Collins's Metropolitan Ambulances Bill, which has just passed the Commons, reaches the House of Lords it will be in charge of Lord Monkswell or Lord Leigh. The last-named, it may be remembered, delivered his maiden speech upon this particular subject when the question was before the House some time ago. There is now every probability that the Bill will be added to the Statute-book in the course of the present Session.

### QUACK MEDICINES.

On Thursday afternoon, in the House of Commons, the attention of the Secretary of State for the Home Department was called by Captain Craig (Unionist, E. Down) to the increase in recent years of the sale of quack medicines. The hon. and gallant member asked Mr. Gladstone whether he was aware of the fact that it had been proved that such nostrums frequently contain nothing but harmless drugs, coloured grease, coloured water, small quantities of aloes, pilules of sugar, etc., although advertised to cure a multitude of different maladies; whether he was aware that the chief cost of such medicines was in the advertising; and whether he would appoint a small committee to inquire into and report on the whole subject.

### THE LICENSING CLAUSES.

There is the best reason for believing that the licensing clauses of the Finance Bill, which is shortly to be resumed in the House of Commons, are undergoing a very considerable reconstruction. During the past few weeks the Chancellor of the Exchequer has received an enormous number of deputations on this particular phase of the Bill, and many written memoranda have also been forwarded to him. Among the latter are two or three which have been prepared by Mr. T. H. W. Idris, in which the hon. member has reviewed in considerable detail the whole system of licensing and made various suggestions to the Chancellor. These include one to the effect that the duty should be levied on the basis of business actually done. In regard to the question of a rebate on the duty on alcohol used in the manufacture of medicines and medicinal wines, we understand that no further steps are likely to be taken.

### THROWN OVERBOARD.

Among the Bills which, as announced by the Prime Minister in making his sessional statement on August 20, are to be abandoned for the present Session are the Shops (No. 2) Bill, which was only recently introduced, the Hops (No. 2) Bill, the Milk and Dairies Bill, and the Milk and Dairies (Scotland) Bill. The list of those which are to be passed, "if time permits," includes the Cinematograph Bill, the Weeds and Agricultural Seeds (Ireland) Bill, and the Merchandise-marks (Ireland) Bill.

On Wednesday the Home Secretary replied to questions regarding the future of the Shops Bill, and in the course of his statements said it would not be possible to deal with

questions of fines and of the quality of food in the Bill, but he would be glad to deal with them by legislation as soon as time permits.

## A German Formulary.

THOSE who attended the Pharmaceutical Section of the recent International Congress of Applied Chemistry will remember the favourable impression made on the meeting by Dr. Karl Dieterich when he read his paper on "*Eupatorium Rebaudianum*." To many Dr. Dieterich was known through his book the "Neues Pharmazeutisches Manual," which was originally produced by his father, Mr. Eugen Dieterich, some twenty years ago. Since the death of Mr. Eugen Dieterich in 1904 the book has been edited by his son Dr. Karl Dieterich, and this year the tenth edition has been published (Springer, Berlin, 15m.). The book has well been called the German "Pharmaceutical Formulas," so varied are the contents. The arrangement and scope differ somewhat from "P.F." In Dieterich's "Manual" an alphabetical classification is adopted, and the work describes and illustrates pharmaceutical processes and machinery rather fully. It begins, for instance, with steam-apparatus and filling machinery, the German equivalents—*Abdampfen* and *Abfüllen*—placing these alphabetically first. A little further on the formulary part of the book is shown—Acetum, Acidum, Aqua, etc., giving the opportunity for a selection of receipts. We have thus shown the general arrangement of the book. At the end is a dictionary of pharmaceutical names in German, Latin, French, and English, so that although the book is in German the English reader will have no difficulty in translating the formulæ. Another appendix is a kind of "Buyers' Guide," giving the names and addresses of firms from whom may be purchased the apparatus or special chemicals named in the work. The following formulæ will illustrate the wide range of the "Pharmazeutisches Manual":

### *Acetum Fumale.*

Fumigating tincture	85	<i>Phenosalyl</i> (disinfectant).
Acetic ether	5	Carbolic acid xtal.
Acetic acid (30-per-cent.)	10	Salicylic acid
		Lactic acid
		Menthol

Mix and, after standing for a day, filter.

Melt together on a water-bath.

### *Syndetikon* (cement).

Calcium chloride	100
Water	400
Cologne glue	500

Soak the glue for twelve hours, and dissolve on a water-bath.

### *Boot-cream Basis.*

Yellow-wax	300
Turpentine	1000
Soap	120
Water	1000

This is coloured with Havana brown, Nanking yellow, fuchsiu, or aniline black according to requirements.

### *Locatelli Balsam.*

Yellow wax	30
Olive oil	40
Larch turpentine	25
Balsam Peru	5
Alkanin	0.2

Soak the glue for twelve hours, and dissolve on a water-bath.

### *Adeps Viridis.*

Schütz's chlorophyll	5
Lard	1000

Soak the glue for twelve hours, and dissolve on a water-bath.

### *Locatelli Balsam.*

Yellow wax	30
Olive oil	40
Larch turpentine	25
Balsam Peru	5
Alkanin	0.2

Soak the glue for twelve hours, and dissolve on a water-bath.

### *Bronze Paint.*

Bronze powder	55
Borax-shellac solution	25
Spirit (90-per-cent.)	10

Soak the glue for twelve hours, and dissolve on a water-bath.

### *Camphor Naphthalin.*

Naphthalin	800
Camphor	200
Coumarin	0.5
Nerolin	0.2
Artificial almond oil	5.0

Soak the glue for twelve hours, and dissolve on a water-bath.

### *Linctus Chlorali Hydrati.*

Chloral hydrate	3
Distilled water	15
Pomegranate syrup	15

Soak the glue for twelve hours, and dissolve on a water-bath.

### *Liquor Ammonii Anisatus.*

Anethol	1
Spirit (90-per-cent.)	24
Solution of ammonia (10-per-cent.)	5

## Recent Wills.

The dates in parentheses refer to the issues of "The Chemist and Druggist" in which the deaths of the testators were reported.

MR. WILLIAM THOMAS MARTIN, Lewes, chemist and druggist, left estate valued at 1,325*l.* 13*s.* 1*d.* gross. (*C. & D.*, July 10, p. 49.)

MR. EBENEZER BLAKE, Marlborough, left estate valued at 1,385*l.* 13*s.* 5*d.* gross, of which 1,332*l.* 16*s.* 10*d.* is net personalty. (*C. & D.*, August 7, p. 256.)

## Observations and Reflections.

By "Xrayser."

### The Rise in Rubber

and the phenomenal activity in the promotion of rubber companies, which were prominently referred to in this journal last week, are indications of the immense importance which this substance has attained in modern civilisation. About ten million pounds' worth of indiarubber is now being imported into Great Britain annually—twice as much as was required at the beginning of this century. Many parts of the world and multitudes of untutored savages share in this prosperity; and, at the same time, a number of German and other chemists are trying to undermine the whole trade by experiments which they hope will show how the same thing can be produced artificially in their laboratories. It is to be hoped that this scientific victory may be long postponed. The French naturalist La Condamine made eaoutchouc practically known to Europe in 1735. For fifty years, at least, scarcely any notice was taken of it. In 1782, Priestley, the oxygen man, in his work on perspective, alludes to it without giving it a name as "a substance excellently adapted to the purpose of wiping from paper the marks of a blacklead pencil," which was sold in half-inch cubes, at 3s. each, by Mr. Nairne, mathematical-instrument maker, opposite the Royal Exchange. The first patent for the use of indiarubber was granted in 1791 to Samuel Peal, for making leather waterproof, and the next, dated 1813, to John Clarke for indiarubber beds and cushions. But it was the introduction of the process of vulcanisation, by the combination of sulphur with the rubber, that brought it into general use. The story of that discovery is a curiously romantic one. Charles Goodyear, of Philadelphia, to whom it was due, was

### A Nineteenth-Century Palissy.

Born in 1800, he had managed to fail badly in the hardware-trade by the time he was thirty, and was also handicapped with a wife and children and a craze about indiarubber which led him into many eccentricities and kept him heavily in debt. His debts sometimes landed him in gaol, but in or out of prison he was always pursuing his fancies or his experiments. He made numerous articles of rubber, but his revenue from these was insufficient to provide material for his experiments. Like the old potter, nothing was sacred when a new process was being tried, and it is recorded of Goodyear that he sold his children's school-books to buy rubber with. It would be too long to tell here how he at last got on the track of sulphur and how he pursued it. His triumph, and his patent for vulcanised indiarubber came in 1844, and this, of course, brought him wealth, a large part of which he spent, however, in defending his rights in law proceedings. At the Exhibition of 1851 he was awarded a Council medal, and Napoleon III. gave him the Cross of the Legion of Honour. Before taking out his patents Goodyear had manufactured vulcanised-rubber goods on a large scale, and Thomas Hancock, of Stoke Newington, a rubber pioneer as enthusiastic as himself, had also discovered the secret, probably by analysing Goodyear's products. It was Hancock who established the scientific fact that sulphur alone was necessary to effect the transformation. Goodyear had associated salts of lead with it, and apparently believed this addition was essential.

### Charles II.'s Last Illness

has interested historians particularly on account of the contest carried on in and about the

royal death-chamber between the representatives of two rival Churches for the glory of securing the much-soiled soul of the dying monarch. It happens, too, that minute details of the medical history of the case are available, and these have been edited with much judgment in a book recently published by the Clarendon Press, Oxford, under the title of "The Last Days of Charles II.," by Raymond Crawfurd, M.D. The King's death is usually attributed to apoplexy, but some time after his decease rumours prevailed that he had been poisoned. Dr. Crawfurd shows that nothing worth calling evidence has been adduced in support of the latter allegation, and he also explains that in 1685 the term "apoplexy" had not a very exact significance. He argues convincingly from the recorded symptoms, from knowledge of the patient's career, and from the account of the autopsy, that Charles died from chronic granular kidney (a form of Bright's disease), with uræmic convulsions. It was probably to refute the growing suspicion of foul play that Sir Charles Scarburgh, the late King's chief physician, who had been in close attendance on him from the beginning to the end of his fatal attack, wrote a detailed account of those few days and of the treatment adopted. This document is preserved in the Library of the Society of Antiquaries at Burlington House, and Dr. Crawfurd has transcribed the original Latin manuscript, translated, and annotated it, and thereby enabled us to realise vividly, and it may be said with a thankful recognition of the improvement that has taken place, the fearful pharmacy of the period in cases where money was no object. Certainly, if another alternative cause of death should be required,

### The Course of Treatment

described by Scarburgh and authorised by the other personal physicians present—from six to fourteen signing the prescriptions—might be reasonably suggested. February 1, 1685, was a Sunday. Evelyn has left a description of the scene at Whitehall on the evening of that day, of "the inexpressible luxury and profaneness, gaming and all manner of dissoluteness, the King toying with his concubines, a French boy singing love-songs," and so on. In the night Charles was observed to take a dose of Goddard's drops, a sort of sal volatile, the recipe of which he had purchased from the inventor. On Monday morning, when he was about to be shaved, he was seized with a convulsive fit, and Edmund King, a surgeon who was at hand, bled him, taking 16 oz. of blood from a vein in the arm. When other physicians arrived they consulted, and the first thing they did was to apply cupping-glasses to the shoulder and withdraw a further 8 oz. of blood. Almost at the same time they administered an antimony emetic known as Infusion of Crocus Metallorum, or Vinum Benedictum, but as only a small part of what they gave was actually taken they followed this with 1 drachm of white vitriol in compound peony-water. Then, "to drain away the humours more speedily by his nether channels," they gave 1 drachm of pil. ex duobus (cocolynth and scammony, equal parts); and "to accelerate the operation of that purgative" they ordered an enema containing 1 oz. of hiera picra, 2 oz. of syrup of buckthorn, and other ingredients. The enema was repeated an hour or two later, and some more pil. ex duobus was also prescribed; and "so as to leave no stone unturned," the head was shaved and blistered. In the evening another ounce of hiera picra was given, a hellebore snuff was prepared to excite sneezing, and a powder of cowslip-flowers "to strengthen the brain." For the night, draughts of manna and cream of tartar were to be alternated with almond emulsion, more hiera picra, succinat spirit of ammonia, and a very compound "cephalic plaster," of which pigeons' dung was one of the ingredients, with euphorbium and Burgundy pitch, was applied to the soles of the feet "to draw the humours from the brain." All this on the first day. Among the new drugs prescribed in the course of the following three days were elm-bark, black-cherry water, Peruvian bark, spirit of human skull, Raleigh's cordial, pearls, Goa stone, and Oriental bezoar stone.

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## Fiscal Chemistry.

SIR THOMAS E. THORPE, C.B., F.R.S., Principal Chemist of the Government Laboratory, is retiring from that position shortly (as announced in the *C. & D.*, June 26, p. 965), after fifteen years' excellent service. In view of this circumstance, and the proposed reorganisation of the Revenue chemical departments (see *C. & D.*, July 3, p. 17), Sir Thomas's report to the Lords Commissioners of the Treasury on the work of the Laboratory during the fiscal year 1908-9 is of special interest. When the late Dr. James Bell retired from the Principalship in 1894 the Government

laboratories were situated in the upper floor of Somerset House, and it was one of Sir Thomas Thorpe's first duties to superintend the erection and fitting-up of new laboratories in Clement's Inn Passage. These laboratories were opened in October 1897, and during their occupancy the work of the department has greatly developed. Sir Thomas mentions that in his first year (1894-5) the staff in the Customs and Excise laboratories in London numbered 64, now there are 91. In the former year, 76,513 samples were analysed, and last year (1908-9) 176,935. It is interesting to recall that Mr. George Phillips, the first Government chemist (to whom Dr. James Bell was an assistant), used rooms in Arundel Street, Strand, as a laboratory, until the Somerset House place was opened in 1859. By 1867 the work there had increased to 9,055 samples. The enormous growth since then (123,729 analyses were made in Clement's Inn laboratory alone last year) is due to improvement in scientific methods and greater fiscal and public requirements. Sir Thomas Thorpe's present report for 1908-9 deals with the work done (1) in the Customs laboratory at Lower Thames Street on goods imported, (2) in the Clement's Inn Passage laboratory, and (3) by stations' analysts. The illustrated descriptions of the laboratories in London, and of the analyses and researches done in them, which appeared in the *C. & D.* of March 13, pp. 403-7, relieves us of the necessity for referring to many of the details which the Principal Chemist sets before the Lords Commissioners in his report, but we may usefully reproduce from the latter some of the statistics of the analyses, as they show our readers which of the goods they deal in come under the official eye. First, in the Customs laboratory 53,206 analyses were made during the year, comprising 24,481 of wet goods, 11,144 of dry goods, 7,556 of saccharine products imported, 3,805 of saccharine products exported, 3,540 miscellaneous samples, and 2,680 hydrometers and gauging-instruments. Among the wet goods (spirituous articles) the following are most interesting to chemists and the drug-trade :

Methyl alcohol, wood spirit, and petroleum, 203; vinegar and acetic acid for denaturing unsound wine, 124; lime and other fruit juices, fortified with, and fruits preserved in, spirit, and grape juice, 503; blacking and polishes, 249; drugs, medicinal and toilet preparations, 1,749; flavouring essences, essential oils, and perfumery, 1,896; fusel oil, pear oil, etc., 240; soaps, fats, and oils, 303; inks, painters' colours, and varnishes, 561; spent peel, sloes, etc., 66; yeast, 20; chloroform, chloral hydrate, and collodion, 12; ethers, acetic butyric, sulphuric, etc., 70; ethyl bromide, chloride, and iodide, 19; chemicals not enumerated, 538; brandy-colouring, liquid fuel, catgut in alcohol, soluble glass, bilge-water, etc., 227.

The dry goods are coffee, chicory, cocoa, and tobacco, and the analyses included 30 chicory and coffee substitutes, 76 chocolate and cocoa preparations and cocoa butter, 20 samples of dandelion-root, 884 of denatured tea and denaturants, and 18 tea preparations, including extracts; 1,045 samples of nicotine and 6 samples of tobacco extracts, besides sheep-dips, fumigating-powder, medicinal cigarettes and other miscellaneous articles. In the third class fell 409 samples of sugar-coated pills and medicinal lozenges, and in the fourth 81 samples of aerated waters. The nature of the analyses done in the laboratory at Clement's Inn Passage during the fiscal year is shown by the following statistics :

*Revenue Departments.*—Worts and materials (beer-duty). 7,785 analyses; beer for exportation, 7,432; beer for dilution etc., 4,888; herb beers, etc., 833; yeast pressings and wash, 1,568; glucose and saccharin for duty and drawback, 957; worts, beers, etc., for arsenic, 797; medicinal tinctures, etc., for drawback, 17,908; compounds, liqueurs, and wines, 3,050; compounds for sugar estimations, 1,482; naphtha (wood for methylating), 795; naphtha (mineral for methylating), 292; tobacco for drawback, 6,759; snuff for drawback, 186;

tobacco, stalks, shorts, and offal for drawback, 40,616; tobacco for moisture, 11,795; tobacco for oil, 2,928; tobacco and snuff for adulteration, 1,098; hydrometers, saccharometers, etc., 3,569; stamps and pigments, 454; miscellaneous, 2,207.

*Other Departments.*—Admiralty, 469; Board of Agriculture and Fisheries, 2,665; Board of Trade, 442; Colonial Office, 8; Office of Works, London, 553; Office of Works, Dublin, 4; Home Office, 162; India Office, 1,109; Local Government Board, 4; Post Office, 217; Stationery Office, 144; Trinity House, 149; War Office, 269.

*Foods and Drugs and Fertilisers and Feeding-stuffs Acts, 155.*

Sir Thomas Thorpe gives, in the course of the report, many hints which are of use to importers and manufacturers as showing the unexpected directions in which the analysts have to pursue their investigations with a view to securing the Revenue. Thus he mentions that fusel oil containing not more than 15 per cent. of dutiable spirit is admitted free of duty, and that a proportion of acetic ether in it equivalent to the spirit allowed is not objected to, provided the impurity is accidental in manufacture. He also refers to the increasing favour among farmers and horticulturists of nicotine preparations as sheep-dips and insecticides, and he states that 1,048 samples of nicotine were examined last year in the Customs laboratory. We note that as regards the exportation of saccharine products under drawback an arrangement is in force between manufacturers and the Commissioners of Customs and Excise for payment of average rates of drawback (revised annually) so as to avoid examination of every parcel that is sent abroad. This arrangement is of great convenience, and saves much labour. Could it not be extended to the class of exports included in medicinal tinctures? These comprise tinctures, liniments, extracts, infusions, medicinal spirits, flavouring-essences, hair-washes, brilliantines, dentifrices, etc., and as many of them are proprietaries of fixed composition, an average drawback might be arranged as with sweet-stuffs. Only 15,942 samples of tinctures, etc., were examined last year, compared with 16,808 the year before, representing 137,150 proof gals., against 152,268. Since the drawback was introduced twenty years ago 1,594,226 proof gals. have been exported. This is mostly new business. The falling-off last year is attributed to bad trade, one factor in which, we may add, is the heavy protective duty of Cape Colony which was imposed at the solicitation of certain manufacturers there. Sir Thomas Thorpe reports that in 173 instances his analysts found that the alcoholic strength claimed was in excess of that found, but in the majority of the cases the discrepancies were traced to loss of spirit by evaporation in stock or clerical errors on the part of the exporter. A considerable number of the samples were examined for freedom from methylated spirit, the results showing in some cases contamination of duty-paid spirit with methylated spirit. The statistics and remarks regarding the last-named article are the next portion of the report which calls for remark. The following table gives the quantities in bulk gallons of each kind of methylated spirit made during the past two years :

	1909	1908
Ordinary and industrial methylated spirit for manufacturing purposes ... ... ...	2,542,910	2,589,500
Mineralised methylated spirit, mainly for domestic use ... ... ... ...	1,123,190	1,583,900
Total bulk gallons of both kinds ... ...	4,171,100	4,173,400

Sir Thomas Thorpe suggests that the decrease in the manufacturing is due to general trade depression, and adds :

The price of alcohol used in making methylated spirit has been twice increased during the year, and now stands

at a higher figure than for many years. The distillers alleged that as the prices of the materials and fuel used by them had all increased, they had no option but to increase the price of the alcohol. The prices of the methylated spirit had, of course, to be correspondingly increased. But, although the increased prices are a serious disadvantage to manufacturers using industrial alcohol, it may be pointed out that the rise in prices of alcohol has been greater in Germany and other Continental countries than in the

Manufacturing Operations or other purposes  
for which Industrial Methylated Spirit  
was used.

	Quantity used.	
	1909	1908
Gals.	Gals.	
Finish for sale ...	336,175	363,074
Varnishes, polishes, and lacquers for sale ...	858,278	886,485
Stains, paints, enamels, etc., for sale ...	66,184	49,203
Varnishes, finish, stains, lacquers, etc., and spirit used for polishing-purposes in manu- facturers' own workshops ...	253,689	257,100
Felt hats ...	120,643	116,590
Celluloid, xylonite, and similar substances ...	28,554	19,561
Oil-cloths, leather-cloths, pegamoid, and similar substances ...	111,892	200,944
Linoleum and similar substances ...	320	536
Smokeless powders, fulminates, and other ex- plosives ...	19,702	18,596
Soap ...	140,964	136,399
Electric-lamp filaments ...	14,688	15,291
Electric cables ...	3,511	4,937
Incandescent gas-mantles ...	18,060	16,888
Ether ...	160,294	166,460
Chloroform ...	11,808	19,941
Ethyl chloride and bromide ...	932	835
Solid medicinal extracts ...	23,224	21,261
Alkaloids and fine chemicals ...	17,263	21,146
Embrocations, liniments, and lotions ...	30,717	39,03
Surgical dressings ...	9,095	5,311
Capsules and other medicinal appliances ...	1,232	2,270
Hair-washes ...	10,583	6,444
Cattle-medicines ...	1,677	1,357
Plant-washes, insecticides, and sheep-dips ...	9,617	8,431
Aniline and other dyes ...	2,988	4,270
Fireworks and matches ...	5,716	4,460
Photographic plates and papers, and other photographic purposes ...	39,418	37,423
Steel pens ...	3,251	2,324
Silk, crape, and embroidery ...	8,397	6,595
Artificial flowers, etc. ...	3,867	2,630
Rubber ...	1,990	3,327
Ships' compasses, spirit-levels, etc. ...	620	695
Inks ...	2,002	2,094
Dyeing and cleaning operations in laundries and dye-works ...	47,319	42,889
Calico-printing ...	4,495	5,479
Preservation of specimens in museums and hospitals ...	8,737	8,442
Educational and scientific purposes in col- leges and schools ...	4,951	4,968
Analytical and scientific purposes in the laboratories of analysts, works-chemists, etc. ...	8,322	4,421
Use in hospitals, asylums, and infirmaries ...	36,718	40,593
Electrotyping and printing ...	1,542	1,381
Various miscellaneous manufactures, includ- ing cements, disinfectants, etc. ...	9,102	10,740
Admiralty dockyards and War Office arsenals and workshops, chiefly for varnishes and polishes ...	18,832	15,293
Total quantity used ...	2,476,586	2,567,090

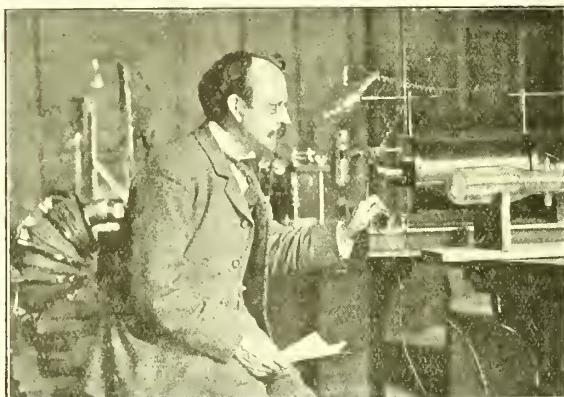
United Kingdom. A rise in price tends to reduce the quantity of industrial methylated spirit used, both by limiting the operations in which it can be profitably employed and also by inducing manufacturers to exercise greater care in their operations, as well as to use more efficient means for recovering the spirit, in order to use it again and again for the same purpose. As mentioned in my former reports, the quantity of industrial methylated spirit issued to manufacturers does not fully represent the quantity of such spirit actually used in manufacturing operations. In many cases this spirit is only used as a temporary solvent for one or more of the substances employed in the manufacturing operations, or for crystallising and purifying purposes. In such cases the Commissioners of Inland Revenue permit the spirit so used to be recovered by distillation, and spirit thus recovered is used again in similar operations. Very compact and efficient apparatus for recovering the spirit has come into use in recent years, and in some cases 90 per cent. or more of the spirit used in an operation is recovered and used again. In such cases the quantity of fresh industrial methylated spirit bought by a manufacturer represents the waste or loss only, and not the quantity of spirit employed in his operations. The greater efficiency

in the recovery plant in recent years thus tends somewhat to mask the actual increase which has occurred in the use of methylated spirit for industrial purposes.

These remarks are intended apparently to show that the provision of a special methylated spirit for industrial purposes is fully appreciated by manufacturers, and that the new regulations are generally accepted as satisfactory by manufacturers, so that the reduction in the amount used last year is not due to dissatisfaction with the Revenue provisions. A table showing the directions in which the industrial spirit is used is appended to the report, and we reprint it, not only on account of the information which it gives as to quantities, but to show the kind of articles which makers (small or large) may on application get permission to use the spirit in. (See previous column). The report also mentions that 439,038 proof gals. of duty-free spirit specially denatured was used by manufacturers, and 4,815 un-denatured by universities, colleges, etc. The former figure is a decrease on 1907-8, but an increase on 1906-7; the latter figure, an increase in both of the total 24,706 proof gals. (5,000 bulk gals.), was foreign spirit, and this included pure absolute alcohol and methyl alcohol (21,185 proof gals.). The total quantity of duty-free spirit used for all purposes in 1908-9 was 6,723,898 proof gals.

## New Discoveries in Physics.

For the third time during the past twenty-five years the British Association for the Advancement of Science is meeting in Canada. In 1884 it departed from its established custom of meeting in the British Isles by conducting its annual proceedings in Montreal under the presidency of Lord Rayleigh; in 1897 it met in Toronto, when the late Sir John Evans was president; and on Wednesday of this week the third meeting in the Dominion commenced with a presidential address by Sir Joseph J. Thomson, F.R.S., Cavendish professor of experimental physics at Cambridge University. This practice of meeting in dis-



SIR JOSEPH JOHN THOMSON, D.Sc., LL.D., Ph.D., F.R.S.

tant parts of the British Empire has not been confined to Canada; it must necessarily, however, occur infrequently, for the centre of the British Association's interests is the British Isles, and the facilities for inter-communication of knowledge to all parts of the Empire are now so great that meetings in the distant parts are not indispensable for sustaining the common interests of all who pursue science for its own sake. Such meetings as that of this month are most useful in giving leaders of science, especially those engaged in teaching and research, opportunities of fraternising which may be productive of

inspiration in new methods, in levelling-up, and in developing that community of interests which is essential to the advancement of science. It is an error to suppose that a British Association meeting is a mere picnic; a glance through the papers which are this year presented to the various Sections belies the supposition, and the men who are acting as presidents of the sections are noted for their appetite for work in promoting universal knowledge.

Winnipeg is fortunate in having as the head of its British Association meeting so distinguished a man as Sir J. J. Thomson, who ranks among the comparatively few living human units gifted with supreme intellects. The portrait of him which we print suffices to show that he has not yet reached the age of veterans; in these days scientific distinction is exhibited early in life, and is promptly recognised. This is the case with Sir J. J. Thomson at all events, and, besides many academic honours to his name, numerous notable discoveries in physical science, such as the demonstration of the corpuscle as the elementary unit of the atom, have been achieved by him. His address on Wednesday evening may be added to his distinctions, since it was popularly interesting and scientifically informative. In mentally summarising it we have unexpectedly divided it into the mystical seven sections, and it will suit the present purpose of record to mention these. First, in dealing with British universities and of the latter-day custom of overseas pupil students attending the old English universities, Sir J. J. Thomson spoke of the excessive competition for scholarships and its effect in inducing premature specialisation, which, sooner than later, induces distaste for research and prevents students of science from acquiring sufficient knowledge of mathematics. This led to an earnest pleading for a greater study of mathematics by physicists and of physics by mathematicians in the interest of pure mathematics. This section of the address was redolent of sound common sense, and led to the observation that "it is possible to read books, to pass examinations, without the higher qualities of the mind being called into play." We have marked "the more recent developments of physics" as the second section of the address, but strictly speaking all that follows are parts of the section which, substantially, was, with the new conceptions of physical processes to which the discoveries have led, the predominating subject of the address. The President attributed recent rapid progress in physics to the discovery of Röntgen rays in 1895, since that discovery has led to the study of the discharge of electricity through gases. That study has enabled investigators to recognise minute particles hitherto undetectable—viz., the electrified particle—and as a result half a millionth of a cubic centimetre of neon can be detected by the spectroscope. The ultimate structure of electricity was the third section of the address. It is known that negative electricity is made up of units all of the same kind, designated "corpuscles," that they can be obtained from all substances, and that they are infinitely small compared to the atom. It is not certain that the unit of positive electricity has been isolated, but when it is this knowledge of the ultimate structure of electricity will lead to "a corresponding degree of certainty with regard to the structure of matter." The President seemed not at all doubtful that "as a provisional hypothesis" matter "is just a collection of positive and negative units of electricity." It forms, as he explained in the fourth section (devoted to the ether), "minute islands in the great ocean of the ether, the *substance* with which the whole universe is filled." The italics are ours; the ether is not imponderable, according to Sir J. J. Thomson; "it is as essential to us as the air we breathe"; it is "the seat of electrical and magnetic forces," and "in a cubic kilometre of it carrying

light as intense as sunlight is at the surface of the earth, the mass moving is about one millionth of a milligramme." This section of the address is an intellectual counter-irritant. The fifth was devoted to a preliminary consideration of radio-activity, which was followed by remarks on the properties of light (our future source of power, said the President) and the laws of thermodynamics, while the seventh and concluding section was on the discovery and investigation of radio-activity. Two passages may be quoted from the last section to illustrate the President's popular style :

... the atoms of the radio-active elements are not immortal, they perish after a life whose average value ranges from thousands of millions of years in the case of uranium to a second or so in the case of the gaseous emanation from actinium. When the atoms pass from one state to another they give out large stores of energy, thus their descendants do not inherit the whole of their wealth of stored-up energy, the estate becomes less and less wealthy with each generation; we find, in fact, that the politician, when he imposes death-duties, is but imitating a process which has been going on for ages in the case of these radio-active substances.

The . . . expectation of life of an atom does not diminish as the atom gets older. . . . The atoms when they are first produced, have not all the same strength of constitution, some are more robust than others. Now if when the atoms are first produced there are some which will live for one year, some for ten, some for a thousand, and so on; and if lives of all durations, from nothing to infinity, are present in such proportion that the number of atoms which will live longer than a certain number of years decrease in a constant proportion for each additional year of life, we can easily prove that the expectation of life of an atom will be the same whatever its age may be. On this view the different atoms of a radio-active substance are not, in all respects, identical.

Lord Kelvin . . . estimated [from temperature] the age of the earth to be less than 100 million years. Though the quantity of radium in the earth is an exceedingly small fraction of the mass of the earth, only amounting . . . to about 5 grams in a cube whose side is 100 miles, yet the amount of heat given out by this small quantity of radium is so great that it is more than enough to replace the heat which flows from the inside to the outside of the earth. This . . . entirely vitiates Kelvin's method of determining the age of the earth. The fact is that the radium gives out so much heat that we do not quite know what to do with it, for if there was as much radium throughout the interior of the earth as there is in the crust, the temperature of the earth would increase much more rapidly than it does as we descend below the earth's surface.

After referring to the physiological and medical properties of the rays emitted by radium, Sir J. J. Thomson brought his address to an end by the following remarkable pronouncement—not the first of the kind which has emanated from the presidential chair of the British Association :

"The new discoveries made in physics in the last few years, and the ideas and potentialities suggested by them, have had an effect upon the workers in that subject akin to that produced in literature by the Renaissance. Enthusiasm has been quickened, and there is a hopeful, youthful, perhaps exuberant, spirit abroad which leads men to make with confidence experiments which would have been thought fantastic twenty years ago. It has quite dispelled the pessimistic feeling, not uncommon at that time, that all the interesting things had been discovered, and all that was left was to alter a decimal or two in some physical constant. There never was any justification for this feeling, there never were any signs of an approach to finality in science. The sum of knowledge is at present, at any rate, a diverging not a converging series. As we conquer peak after peak we see in front of us regions full of interest and beauty, but we do not see our goal, we do not see the horizon: in the distance tower still higher peaks, which will yield to those who ascend them still wider prospects, and deepen the feeling, whose truth is emphasised by every advance in science, that 'Great are the Works of the Lord.'"

#### Straits Pharmacy Bill.

The Singapore "Free Press," in a leading article, deals with the proposed new Straits Pharmacy Bill, pointing out many defects as the result of hasty drafting. After giving the chief points about the Bill,

which have already been summarised in these columns, it questions whether the good to be achieved will compensate for the disabilities under which all the rest of the community will suffer. For instance, the Government monopoly of the sale of deleterious drugs and hypodermic syringes is altogether a new proposal which will want watching carefully so that the legitimate business of dispensing may not be unduly interfered with. This is the chief point of interest to chemists in the Straits, and we have reason to believe that they will ask "unofficial" members of the Legislative Council to scrutinise the proposals carefully, and see that their interests are protected.

#### Adjusting Dosage.

Professor Moore, of Liverpool University, contributes to the "Bio-Chemical Journal" the results of experiments which have shown the professor the fallacy of stating the dose of a drug in relation to the body-weight of the subject. Many drugs act upon two individuals of different size proportionately to their body-surfaces. The dose of many drugs given to infants to produce a given therapeutic result is often many times larger than the proportionate dose for an adult on the basis of the body-weight. Apart from a few cases of idiosyncrasy, as with morphine, it is usually found that the balance is in the opposite direction. Thus, an adult weighing 150 lb. cannot be given fifteen times the dose for an infant weighing 10 lb., but more nearly a dose of six times as much, which is the two-thirds power of the ratio in the two weights. Professor Moore further claims that there is a limit to the power of applying therapeutic agents against disease in larger animals, and that a cure may be effected with ease in smaller animals, but not in large animals or in man, simply because of their greater size, and not because of any peculiar sensitiveness to the drug. In support of these contentions he cites the case of atoxyl, a drug which easily cures trypanosomiasis in the mouse; but the difficulty of effecting a cure increases with rabbits, while with men and the larger animals the difficulty is greatly increased, as the trypanosomes can scarcely be driven out from the circulation by such sub-lethal doses as it is possible to give. A study of the action of arsenic, antimony, atoxyl, and the soluble salts of bismuth, iron, and other metals has led Professor Moore to the following conclusions :

1. In the case of substances which act by stimulation or inflammation of surfaces, such as the intestinal tract, the maximum dose is proportional not to the body-weight but to the two-thirds power of the body-weight.

2. This leads to important differences in dosage in men and large animals.

3. It also shows that the possibilities of treatment are diminished by natural means in man and large animals, which have naturally less intestinal and other surfaces per unit of weight. Accordingly they can only take up proportionately less drug, and if any remedial substance is manufactured by the surface cells they can only manufacture relatively less than the smaller animal.

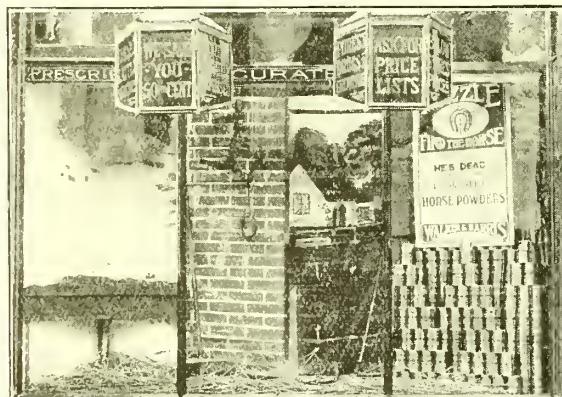
4. In general terms it may be said that the uptake and output of poison or infection are relatively more rapid in the child and in small animals, which are on this account more susceptible to the onset of infection, and at the same time have more power of recuperation when infected.

Professor Moore suggests that it is preferable to determine the dose for an animal of an observed weight by taking the two-thirds powers of the two weights and calculating the dose for an animal weighing 1 kilo., stating the dose as for a 1-kilo. animal and not as per kilo. of body-weight. From this dose the dose for a man of average weight—say, 64 kilos.—can be deduced. It is the dose for the 1-kilo. animal, multiplied by the two-thirds power of 64, which is 16. This shows that the usual method of calculating the dose gives a result four times too high.

**HONOLULU HONEY.**—The exports from Hawaii during 1908 amounted in value to 7,604£., against 6,059£. in 1907.

#### Chemists' Windows.

Contributed by "C. & D." Subscribers. The Editor will be glad to receive photographs of effective window-displays for inclusion in this section. Notes on the displays should accompany the photographs.



A Horse-powder Window.

This is a stable in a chemist's window—that of Messrs. Walker & Harris, Sun Street, Canterbury. To the left is a corner of a horse's stall with manger and feed, all real; the background, with glimpse of the farmhouse through an open door, was painted by one of the staff; and to the right is a pile of the firm's horse-powder in tins. The window is strewn with straw, and whip, bridle, and other horse necessities complete to the verisimilitude. It was an effective and profitable window. The card to the right had the following wording upon it:

Puzzle: | Find the Horse. | You can't? Right! | Neither can we. | Why? We'll tell you. | He's Dead! | Dead as a door nail | when a course of | Frank White's | celebrated | Horse powders | would have saved him. The rest described the characteristics of the powders.



"Own Preparations."

Mr. Alfred W. Lewis, pharmacist, The Bridge, Newport, Mon., sends us the photograph from which the above engraving has been made. In dressing his windows Mr. Lewis aims to put in medicines which convey to the passer-by that they are the right remedies for him or her. His business consists entirely of drugs and medicinal preparations, with optics and tooth-extraction. He stocks neither "patents" nor named specialities not made by himself; nor does he deal in heavy oils, wines, or seeds—it is all pharmacy. Mr. Lewis writes all his own showcards—he took a C. & D. prize for this art. Under the centre one ("Make food nourish you") is (1) a bronchitis-mixture card, (2) a stomachic-mixture one ("Creates a new stomach"), (3) emulsion of eggs, cod-liver oil, and hypophosphites, (4) tonic liver-mixture, and (5) a food-reform card. The preparations are shown in the window in a conventional manner but effectively, and the sill of the window generally contains something unusually attractive.

## Ammonium Phosphate:

Its Volumetric Determination, with Some Notes on the Availability of the Lead-oxide Method.

By John M. Wilkie, B.Sc., A.I.C.

THE quantitative requirements of the B.P. for this salt are faulty; that the salt should contain phosphoric acid exactly equivalent to 99.68 per cent. is an unpractical requirement. Moreover, the method of carrying out the determination as magnesium pyrophosphate is not up to modern views—5-per-cent. ammonia is too strong for washing-purposes. If it is considered necessary to prescribe details for such determinations, care should be taken that they are above criticism. With such a salt as this it must be borne in mind that any method of determination solely dependent on the phosphoric-acid content is open to question, as the salt loses ammonia on exposure. In this respect it might be noted that a dry salt deficient in ammonia to the extent of 20 per cent. would show only 107 per cent. by any method of phosphoric-acid determination. Since the water-content cannot be directly determined, and ammonia determinations, though theoretically simple and easy of carrying out in a properly equipped laboratory, are at the best time-consuming, it seems well to combine a phosphoric-acid determination with a limit-test for fixed alkalies, etc. This may be done by precipitating with lead acetate, filtering, removing residual lead with hydrogen sulphide, evaporating, and igniting gently to drive off ammonium salts. If hydrogen sulphide is objected to, silver nitrate may be used in the presence of ammonium acetate, residual silver being removed by hydrochloric acid. It might be here noted that Greenish and Smith ("P.J.", 1901, I., 777) carried out their solubility experiments with a salt deficient in ammonia to the extent of at least 12 per cent. In other words, their salt, if dry, had the calculated composition :

(NH <sub>4</sub> ) <sub>2</sub> HPO <sub>4</sub>	...	...	...	...	88
H <sub>3</sub> PO <sub>4</sub>	...	...	...	...	12
100					

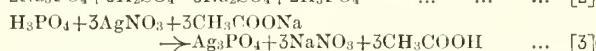
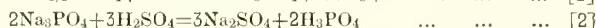
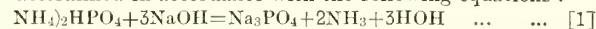
Considered in this light, the high solubility found by them is not surprising, but the particular value of such work is difficult to see. Squire and Caines (*C. & D.*, 1902, II., 944) showed it was easy to prepare a salt conforming closely with the B.P. requirements, and that such salts occurred in commerce at that time.

It may be taken as certain that some quantitative requirement based on a phosphoric-acid determination will be included in the next B.P., and so it becomes of some value to consider the various methods available. Weighing as magnesium pyrophosphate is the standard gravimetric method, and, carried out properly, yields highly accurate results. Perhaps the best procedure is that of Schmitz, who precipitates magnesium ammonium phosphate from a boiling acid solution with 2.5 per cent. ammonia added drop by drop until the solution has a distinct ammoniacal odour, cools, adds one-fifth of the volume of 10-per-cent. ammonia, stands at least ten minutes, filters, and washes with 2.5-per-cent. ammonia.

The ammonium-molybdate method need not be considered here. Now, the ammonium-magnesium-phosphate method involves precipitation, washing, drying, and ignition—the whole demanding some analytical practice to secure accurate results—and at the best occupies considerable time. The question then arises whether there is any other gravimetric process possessing the required accuracy and at the same time quicker and more easy of carrying out. The lead-oxide method, already adopted in the B.P. for phosphoric acid, is capable of high accuracy, and, if available, seemed to be all that was required. Preliminary experiments were disappointing, low results being consistently obtained; the longer the heating, the lower the result. Thus 99.7 per cent. and 97.0 per cent. were obtained in consecutive experiments instead of a theoretical 100.7 per cent. On consideration it seemed likely that meta-phosphoric acid was volatilising from the walls of the crucible; obviously such loss would be proportional to the period of heating. When suitable precautions were taken, excellent results were obtained. On evaporation of phosphoric-acid solutions

in the presence of lead oxide combination occurs, but with ammonium phosphate it is otherwise. Some of the ammonia is certainly turned out during the evaporation, but after several evaporationes considerable amounts still remain, and this is the cause of the trouble. On ignition the remaining ammonium phosphate is dissociated into ammonia and phosphoric acid, and so traces of the acid escape from the surface of the oxide, mainly at the walls of the crucible. The precautionary measures to be adopted are obvious. After evaporation of the solution with lead oxide on the water-bath, gently heat the covered crucible over a rose flame until all ammoniacal odour has gone, cool, wash the walls of the crucible with a few c.c. of water, evaporate, and ignite, when a constant weight is readily obtainable.

If, then, a gravimetric method is desirable, the lead-oxide method thus modified deserves the preference on the score of simplicity and rapidity, the accuracy being of a high order in the absence of non-volatile impurities. But equally accurate results are obtainable by a simple modification of the author's method for the determination of phosphoric acid in which the acetic acid, liberated on adding silver nitrate in the presence of sodium acetate, is titrated with standard alkali in the presence of phenolphthalein ("J.C.S.I.", 1909, 68). The method as originally published was adapted for the ordinary and acid sodium phosphates, as well as for phosphoric acid, but as it stands is unsuitable for the ammonium salt, the principal obstacle being the necessary use of phenolphthalein in the presence of ammonia. This difficulty is completely eliminated by boiling with excess of sodium hydroxide to expel ammonia and adding sulphuric acid exactly equivalent to the added alkali. The solution may now be regarded as containing essentially free phosphoric acid with some sodium sulphate. The phosphoric acid so produced may then be determined in accordance with the following equations :



The ammonium phosphate employed was of a high degree of purity, though somewhat deficient in ammonia. Chlorides and sulphates were entirely absent—in fact, the only impurity detected was a trace of sodium. For all the quantitative determinations a solution was prepared containing 13.209 grams per litre, this solution being 2N/10 for the ammonia and 3N/10 for the phosphoric acid (: PO<sub>4</sub>).

After various trials the following procedure was adopted :

Ten c.c. of the above solution was transferred to a round-bottom Jena flask (such as is used in Kjeldahl determinations), 30 c.c. N/10 NaOH was added, the flask clamped in an inclined position and boiled until the volume was reduced to about 5 c.c.; 30 c.c. N/10 H<sub>2</sub>SO<sub>4</sub> was next added, and the contents again boiled for a few minutes to expel carbon dioxide. The flask was then cooled in running water, 3 to 5 c.c. 20-per-cent. sodium acetate, and then 33 c.c. N/10 AgNO<sub>3</sub> added. The flask was corked and the contents well shaken, a few drops of phenolphthalein solution added, and then N/10 baryta was run in until a permanent pink tint was produced, most clearly seen when the precipitate is given a moment to settle.

The end point is sharp and permanent, and easy of recognition. If the salt is exactly 100 per cent., 30 c.c. N/10 Ba(OH)<sub>2</sub> will be required, and so the percentage is obtained by multiplying the number of c.c. consumed by 10/3. In the earlier experiments the alkaline solution, after concentrating, was twice diluted with water and each time boiled down to a low volume. If boiled briskly, one concentration as directed is sufficient. Kjeldahl flasks, though convenient, are not essential. Excellent results are obtained when porcelain dishes are employed, the alkaline solution being evaporated to dryness, and the acid solution, after concentration to a low volume, transferred to a flask or cylinder for the titration. When dishes were employed, the concentrations were performed on the water-bath.

N/10 soda was substituted for the baryta in some of the titrations, but even when the presence of carbonate was allowed for, the results obtained were not wholly satisfactory. The factor was determined by titrating in the cold

against standard sulphuric acid which had been freed from carbon dioxide by boiling and cooled just before the titration. If soda must be used, it is better to content oneself with the alternative process given later, though, of course, the accuracy is of a much lower order.

Results obtained by the various methods expressed in terms of per cent.  $(\text{NH}_4)_2\text{HPO}_4$ :

Ammonium Magnesium Phosphate (Schmitz)	Lead-oxide Method	New Volumetric Method [Ba(OH) <sub>2</sub> ]
Per cent.	Per cent.	Per cent.
100.7	100.85	100.7
—	100.80	100.7
—	—	100.8

The ammonia distillations gave:

92.2 per cent. of theory  
92.0      "

Taking the figures 100.7 and 92.1, the composition of the salt used was:

Theory for $(\text{NH}_4)_2\text{HPO}_4$		
H <sub>3</sub> PO <sub>4</sub> ... ... ...	74.73	74.21
NH <sub>4</sub> ... ... ...	23.75	25.79
H <sub>2</sub> O, etc. (by diff.) ...	1.52	—
100.00	100.00	

The agreement between the results obtained by the three methods is good, the slightly high figures of the lead-oxide process simply reminding one of the fact that all non-volatile impurities are here returned as phosphoric acid. An interesting point arising from a consideration of the figures is that while the mean phosphoric-acid content is 100.7 per cent., the theoretical content corresponding to the ammonia is about 103 per cent., thus indicating the presence of a certain amount of water. This was not unexpected, as a distinctly damp powder was obtained on powdering the crystalline salt. It may throw further light on the solubility figure of Greenish and Smith.

**RAPID VOLUMETRIC PROCESS.**—If accuracy is not of the greatest importance, both phosphoric acid and ammonia may be determined with very little expenditure of time, as follows:

Dissolve 13.21 grams of the salt in water, adjusting the volume to 100 c.c.

**Phosphoric-acid Determination.**—Transfer 10 c.c. of the solution to a porcelain dish, add 30 c.c. N/1 NaOH, and concentrate, preferably on the water-bath, to about 5 c.c. Add a few c.c. of hot water, mix well, cool, and titrate with normal sulphuric acid in the presence of methyl orange. If  $a$  c.c. of acid are required to produce a pink tint,

$$\text{Per cent. H}_3\text{PO}_4 \text{ of theory} = (30 - a) \cdot 10 \\ = 10x \text{ where } x = 30 - a.$$

**Ammonia Determination.**—Transfer 10 c.c. of the solution to a porcelain dish, add a few drops of methyl orange, and titrate with N/1 H<sub>2</sub>SO<sub>4</sub>. If  $y$  c.c. of acid are required to produce a pink tint,

$$\text{Per cent. NH}_3 \text{ of theory} = 5(x+y).$$

In the first titration the change of tint corresponding to the monosodium salt is not particularly sharp, but fair approximations are obtainable. Thus in consecutive experiments the following values for  $x$  were obtained:

10.13, 10.16, 10.12, 10.06; mean=10.12,

corresponding to a percentage of 101.2 against a theoretical 100.7.

In the second titration the end-point is distinctly better. In consecutive experiments the following values for  $y$  were obtained:

8.20, 8.15, 8.20; mean=8.19, giving  $x+y=10.12+8.19=18.31$ , corresponding to a percentage of 91.6 against a theoretical 92.1.

The theoretical basis of the method is perhaps most simply treated by the consideration of a particular case. Suppose we were given a flask in which had been placed some phosphoric acid and ammonia, and were asked to find the total ammonia present, at the same time being informed that the phosphoric acid added was capable of neutralising

10.1 c.c. N/1 NaOH with methyl orange as indicator. If, on addition of methyl orange, we found the reaction was alkaline, and we had to add 8.2 c.c. N/1 H<sub>2</sub>SO<sub>4</sub> for the tint to change from yellow to pink, the total ammonia present was obviously  $10.1 + 8.2 = 18.3$  c.c. normal, for we were told that the phosphoric acid required 10.1 c.c. for methyl orange to change from pink to yellow, and we have just found that an additional 8.2 c.c. was present. But, owing to the fact that ammonia is a volatile base, we could have obtained for ourselves the total ammonia, and also the phosphoric acid present, although no information whatever had been vouchsafed. Assuming sufficient material, we could have evaporated to dryness a similar quantity to that previously worked on and ignited very gently to drive off ammonia, and after suitable treatment we should find the residual phosphoric acid would require 10.1 c.c. N/1 NaOH to change the tint of methyl orange from pink to yellow. This obviously gives a measure of the phosphoric acid present; but it just as truly gives a measure of the ammonia which escapes detection in the direct titration. We then have, as before, the total ammonia equals 18.3 c.c. N/1 (10.1 + 8.2). A little consideration will show the complete analogy between the two cases, but in practice it is more convenient to expel the ammonia by heating with standard alkali. If the salt is of theoretical composition,  $x$  and  $y$  will both equal 10, but owing to loss of ammonia  $x$  is usually slightly greater and  $y$  markedly less than 10. Should the salt contain less ammonia than corresponds to the acid salt  $[(\text{NH}_4)_2\text{H}_3\text{PO}_4]$ ,  $y$  will be negative—that is to say, the salt will react acid to methyl orange, and N/1 NaOH must be substituted for the N/1 H<sub>2</sub>SO<sub>4</sub>. In the limiting case  $y$  will equal -10, and so  $x+y=0$ —this corresponds, of course, to phosphoric acid.

[The work for this paper was done in the experimental laboratories of Boot's Pure Drug Co., Ltd., and its publication has been unavoidably delayed.]

## Agri-Horticultural Ditties.

### THE SEEDSMAN'S LAMENT.

In the days that are past,  
When no Pharmacy Act  
Horticulture harassed,  
Never poison we lacked,  
For the Law at our traffic was winking;  
Then we sold every day,  
To some bucolic youth,  
Deadly nicotine spray  
For his beans; and forsooth,  
Of a licence we never were thinking.

When the broccoli fiend,  
Came to us with wry mouth;  
When the kidney bean leaned,  
With a droop to the south,  
And the gardener sought us despairing,  
We talked glibly of slugs,  
Spake a sermon "On Weeds,"  
Gave him arsenic in mugs  
With his bulbs and his seeds,  
Nor for Law or for Coroner earing.

When the cucumber crank  
Found his treasures decay,  
When potatoes were rank,  
And a blight killed the hay,  
Our coffers lightheartedly filling,  
We sold fumigants free  
Or to man or to maid;  
Soaked the doomed apple-tree  
With insecticides laid  
In the pantry to wait for the killing.

But that day is now past  
(Good old day that—in fact,  
Far too good e'er to last):  
This new Pharmacy Act  
Has changed out of all recognisance;  
For no longer can we  
Sell the marrow and pea,  
Seed of flower, apple-tree,  
Weed or slug killer free:  
We must actually ask for a licence!

## Trade Report.

**NOTICE TO BUYERS.**—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

### 42 Cannon Street, London, E.C., August 26.

THERE is evidence of improved business in the drug and chemical markets in several directions, but the week has not been characterised by any outstanding features. Opium is still a centre of interest, higher rates having again been paid for quantity by American buyers and speculators. Morphine has been advanced about 2d., makers having sold a fair quantity. Glycerin remains very firm at last week's advance, makers being more anxious to sell dynamite qualities than double-distilled. Iodides are firm, practically all the business going into English makers' hands. Bromides are in slightly more inquiry. Quicksilver is steady, and there are reports as to a possible advance in santonin, owing to a projected monopoly in raw material. Copper sulphate is easier, caustic soda is firm, and ammonia-sulphate dearer. Both citric and tartaric acids are unaltered. Refined camphor is steady but quiet. Among drugs, hydrastis and senega are higher for shipment, especially the former. Insect-flowers show more demand for export, and holders of juniper-berries ask higher rates. Menthol shows signs of reviving interest and more inquiry. Italian castor oil is dearer, cod-liver and lemon oils are slow. American peppermint is firm. At the shellac-auction a large quantity sold without reserve at lower rates. Fluctuations of the week are as below :

Higher	Firmer	Easier	Lower
Ammonia sulphate	Benzols	Copper sulphate	Mace
Castor oil (Ital.)	Gamboge	Cardamoms	Shellac
Hydrastis (c.i.f.)	Juniper berries	Ipecacuanha	
Insect flowers	Morphine		
Opium (Turkey)	Santonin		
Senna (Tinn.)	Senega (c.i.f.)		
Turpentine			

### LONDON MARKETS.

ANISEED is slow of sale at unchanged prices; common Russian 19s. 6d., good 21s. 6d., and Spanish 37s. 6d. per cwt. In the drug auction 20 bags of fair Russian were retired at 20s.

ANTIMONY.—Sales of Japanese crude have been made up to 15l. 10s. per ton spot.

BALSAM TOLU.—A parcel of 25 cases large tins has arrived in the warehouse.

CAMPHOR (REFINED) is steady, with a small trade in 1-oz. tablets at 1s. 8½d. and ¼-oz. at 1s. 9d. spot. The exports of crude and refined camphor from Japan during the five months ending May were as follows :

	1907.	1908.	1909.
Kin ...	1,691,843	1,313,608	12,92,894
Yen ...	2,714,000	1,519,000	1,135,000

In the drug auction five cases slabs were held at 1s. 6½d. per lb., and three cases ¼-oz. tablets damaged sold without reserve at 9d. to 1s.

CANARY-SEED is flat and difficult of sale, as dealers are well stocked, but quotations are nominally unaltered at 50s. per quarter for any description of useful seed.

CINNAMON.—At auction 290 bags of Ceylon chips offered, and 110 sold at 2½d. for fair thin.

CLOVES.—At auction 100 bales of Zanzibar were bought in at 4½d. for good bright. Privately the market for arrival is dull, with sellers of November-January shipment at 4½d. per lb. c.i.f. d/w.

COLOGYNTH.—The value of pulp remains at from 7½d. to 8½d. per lb., with little business done.

COPPER SULPHATE.—Liverpool brands are easier at from 18s. 7s. 6d. to 18s. 10s. for prompt and at 19s. for December-February shipment, the latter being unchanged.

CORIANDER-SEED is selling at 8s. 6d. to 9s. 6d. per cwt. for common and wormy, and at 10s. 6d. per cwt. for good new-crop Morocco.

CUMIN-SEED.—Retail sales have taken place at 35s. to 37s. per cwt. for common to good sifted Morocco, and at 38s. 6d. for Malta, being steady.

FENUGREEK-SEED sells at 8s. 6d. per cwt. for new-crop Morocco on the spot.

GALLS.—Quiet, with sellers of Persian blue on the spot at from 54s., to 57s., green at from 47s. 6d. to 50s., and white at from 41s. to 42s. 6d. China has been sold at 50s. spot.

GINGER.—At auction a moderate quantity of Cochin and Calicut was offered, but only small sales were made, including C cut and scraped at 51s., and D rough, slightly wormy, at 35s. 6d. Bold cut was bought in at 80s. to 85s., and medium cut at 70s., and fair washed Calicut at 45s.

GLYCERIN remains very firm at last week's official advance to 85s. per ton naked in 5-ton lots and 89s. in 56-lb. tins and cases for double-distilled, s.g. 1.260 quality. These prices have been paid to the refiners, as there is very little in second-hands, and dealers have also been working with extremely low stocks. Crude is offered at from 53s. to 55s. per ton, according to position and quantity, and dynamito quality at about 78s. per ton. Refiners at the moment prefer to sell the latter, as the price is higher in proportion to that of double-distilled.

GUM ARABIC.—In the drug auction 11 bags ordinary glassy and damaged Soudan sold without reserve on underwriter's account at from 23s. to 26s. per cwt.; 60 bags small to bold slightly blocky and glassy Australian were retired at 40s. Of so-called "insoluble" Bushire gum very little is offered privately, but about 700 bags will be on offer next week.

HYDRASTIS.—The extreme price of 8s. 4d. per lb. c.i.f. is cabled from New York for fall-dug root, but on the spot a little could be had at 7s. 11d. to 8s. net.

INSECT-FLOWERS.—More inquiry is reported this week, purchases having been made here on U.S.A. account, owing to London prices being below the parity of those ruling in Trieste. Since the above was written we learn that the London market has now been practically cleared of all open and half-closed flowers, and there are only a few bales of closed offering at 180s. to 200s. per cwt. Trieste prices still remain very high, and holders there are very firm in their ideas, so possibilities point to famine prices when the demand again sets in. In the drug auction a bid of 165s. was refused for a bale of good closed Dalmatian flowers, the limit being 180s., and for a bale of half-closed another bid of 145s. was refused.

ISINGLASS.—At auction 712 packages were offered, the bulk of which sold. Brazil was steady to easier for dark lump. Penang was mostly sold at steady rates for leaf, tongue being irregular. Long Saigon leaf was rather dearer, but round was easier. Bombay was irregular.

JUNIPER-BERRIES.—Holders, in anticipation of a short crop, are asking an advance, from 15s. to 17s. being wanted on the spot.

LINSEED is unchanged but quiet at 50s. per quarter for good clean seed.

MACE declined 1d. per lb. in auction, 104 packages of West Indian being disposed of at 1s. 8d. to 1s. 9d. for good pale, 1s. 5d. to 1s. 7d. for fair, and at 1s. 3d. to 1s. 4d. for red and ordinary.

MENTHOL.—Business in Kobayashi for August-September shipment is reported at 8s. 2d. per lb. c.i.f., and sellers of Suzuki near at hand offer at 8s. c.i.f., but the first-hand price remains at 9s. 6d. c.i.f. Spot (Kobayashi) has been sold at 8s. 6d.

**MORPHINE.**—Fair quantities of hydrochlor. have been sold from the makers' hands at 5s. 10d. per oz., but the quotation is now 6s. for large quantities.

**NUTMEGS.**—The good supply of 360 packages of West Indian was offered, of which practically all sold at steady to higher rates.

**OIL, CASTOR.**—Firm. Hull make of first-pressing is quoted 28*l.* per ton in barrels for August, and 10s. less for September-December delivery, ex wharf London. Finest Italian medicinal oil is about 5s. 3d. higher, the spot price being 4*d.* per lb.

**OIL, COD-LIVER.**—Demand continues slight at the unaltered quotation of 63*s.* to 65*s.* c.i.f., according to brand. Our Bergen correspondent writes on August 23 that there has been a little more interest of late in cod-liver oil, and finest Lofoten, non-congealing quality, is not obtainable below 68*s.* per barrel c.i.f. Bergen. The exports from Bergen up to date amount to 8,718 barrels, against 12,293*l.* barrels at the corresponding date of 1908.

**OIL, LEMON.**—Quiet at from 3*s.* to 3*s.* 3*d.* per lb. c.i.f. for forward shipment, and at 3*s.* 5*d.* to 3*s.* 6*d.* spot.

**OIL, PEPPERMINT.**—A small business has been done in Wayne County tin oil at 6*s.* 3*d.* spot, being firm. H.G.H. is offered at 8*s.* 8*d.* spot. Japanese dementholisised has been sold at 5*s.* 6*d.* for Kobayashi and at 5*s.* 5*d.* for Suzuki on the spot, with near at hand Kobayashi offering at 5*s.* 4*1/2**d.* c.i.f.

**OPIUM.**—It will be seen from our Smyrna cable that a large quantity has been sold at a further advance, while it also said that the crop is now proving to be much less than anticipated, from 5,000 to 5,500 cases being the estimate. Prices may be said to have advanced 9*d.* per lb. in primary markets within the past week, and on the spot Turkey druggists has been sold at from 11*s.* 9*d.* to 12*s.* 6*d.* Malatia at 12*s.* 6*d.* to 13*s.* 6*d.*, and for rich Tokats from 13*s.* 6*d.* to 14*s.* 6*d.* has been paid in a small way. Persian is firm and in small supply. A Smyrna correspondent writes on August 13 that the market is strong and firm. The situation opened at last week's quotations, but quickly advanced 3*d.* per lb., and for eligible new-crop material buyers must make up their minds to pay 10*s.* 6*d.* to 11*s.* 6*d.* as to quality. Owing to this firmness and strong disinclination to sell, buyers were obliged to retire, and only 22 cases of current and selected druggists' changed hands at 10*s.* to 10*s.* 6*d.* as to strength and quality. As regards the Turkey crop, it is now estimated that the out-turn may not exceed 6,000 cases; on the contrary, in many quarters it is firmly maintained that 5,500 is a safer figure. The arrivals to date amount to 923 cases, against 1,135 cases. Another correspondent, writing from Smyrna on August 14, states that the market continues to rise, and according to all accounts it will become more and more marked, as both consumers and speculators are continually on the market, paying higher prices with each new transaction. The sales are as follows: Nine cases prime Karahissar t.q. at from the equivalent of 9*s.* 11*d.* to 10*s.*, and 19 cases "extra" Karahissar t.q. at from 10*s.* 6*d.* to 11*s.* per lb. c.i.f. terms. The market closes firm with buyers.

**OTTO OF ROSE.**—Prices quoted by various agents do not appear to show so great a reduction as previously anticipated, and for the very finest quality up to 24*s.* per T. oz. is quoted. As yet only a few contracts have been placed.

**PEPPER (BLACK).**—At auction 94 bags of Tellicherry were bought in at 3*1/2**d.* for fine, and of Tuticorin 47 bags sold at from 3*1/4**d.* to 3*3/4**d.* for good and 3*d.* for small. Fair to good Ceylon was bought in at from 3*1/4**d.* to 3*1/2**d.* Privately, there are sellers of fair Singapore at 3*1/4**d.* spot, and for arrival business has been done for October-December shipment at 3*3/4**d.* c.i.f. d/w.

**PEPPER (WHITE).**—At auction 118 bags of Singapore were bought in at 3*1/4**d.* for fair. Privately the sales include fifty tons at 4*2/3**d.* for July-August shipment, 4*2/3**d.* for September-November, and 4*1/2**d.* for October-December shipment. The spot price of fair Singapore is 5*d.* per lb.

**PIMENTO.**—At auction nothing was offered. Privately,

fair is quoted at 2*1/4**d.* to 2*2/3**d.* per lb., and for distant shipment the quotation is nominal at 21*s.* per cwt. c.i.f.

**POTASSIUM IODIDE.**—The English makers report a fair demand on the basis of 7*s.* 11*d.* in 1-cwt. lots. Japan is unable to offer for shipment, and orders put forward have not been accepted owing to the shortage in raw material. On the spot there appears to be nothing on offer, but an occasional lot of American make can be had at a shade below English makers' price.

**QUICKSILVER.**—In steady demand, the importers' price being 8*s.* 5*s.* per bottle; in second-hands 4*s.* less will buy.

**QUININE.**—The demand continues quite retail on the previous basis of from 6*2/3**d.* to 7*d.* for German sulphate from second-hands, and 7*1/2**d.* from makers.

The exports of "quinine, quinine salts and combinations" from Germany during the six months ending June were as follows:

	1907	1908	1909
Kilos.	... 110,300	... 68,300	... 70,200
Marks	... 2,978,000	... 1,639,000	... 1,685,000

The values for 1909 are based, wholly or mainly, on the prices of some earlier year than that under which they are shown. The export values for the months of May and June 1909 are for the most part declared, while those for earlier periods are mainly based on official unit valuations.

**RHATANY.**—Small sales of fair quality have been made at 7*1/2**d.* per lb.

**SANTONIN.**—We understand that negotiations are taking place with a view to bringing about a monopoly in the crop of Russian wormseed, and that a decision will be reached in a few days. Meanwhile the market for santonin is very firm, and should the monopoly be formed a substantial advance may be looked for. There is a little offering on the spot at 13*s.* 6*d.*

**SANTYL.**—Which is now put up in 1-oz. bottles, is quoted at from 2*s.* 3*d.* to 2*s.* 6*d.* per oz. as to quantity.

**SENEGA.**—For shipment from New York the firmer price of 1*s.* 9*d.* c.i.f. is quoted, and on the spot 1*s.* 9*d.* net will still buy. Previous to the advance, business has been done at 1*s.* 8*d.* c.i.f.

**SHELLAC.**—Interest this week has centred in the auctions, at which 1,420 cases were offered, and 1,380 sold without reserve, with fair competition. Fine Orange was from 3*s.* to 5*s.* lower, and Second Orange and Garnet from 2*s.* to 3*s.* lower. A. C. Garnet was steady and GAL lower. Buttons were irregular but easier. Fine strong curly slightly matted to matted Orange sold at 86*s.* to 87*s.*, fine pale flat free 85*s.*, fine strong curly slightly matted 82*s.* to 83*s.*, firmly matted 80*s.* to 81*s.*, blocky 79*s.*, bright curly reddish slightly matted to firmly matted 76*s.* to 78*s.*, fair TN qualities 71*s.* to 73*s.*, slightly matted to matted at 68*s.* to 69*s.*, flat flimsy red free at 68*s.*, fair to good blocky at 63*s.* to 66*s.*, blocky sweepings 58*s.* to 62*s.*, low dark block 58*s.* A. C. Garnet: Slightly cakey 74*s.*, glassy hard cakey 69*s.* to 71*s.*, blocky 68*s.* GAL in circle, fair hard cakey to blocky 53*s.* to 54*s.*, common ditto 42*s.* to 46*s.*. Button, fine pure stamped 94*s.*, pure No. 2 87*s.* to 88*s.*, dark ditto 77*s.* to 79*s.*, good pale No. 1 78*s.* to 79*s.*, glassy weak No. 1 71*s.* to 77*s.*, weak seconds 64*s.* to 66*s.*, weak resinous 56*s.* to 60*s.*, blocky pale chips 55*s.* to 62*s.*, and dark thirds 56*s.* per cwt. Privately spot is quiet at from 72*s.* to 75*s.* for TN and for arrival November-January shipment TN has been sold at 72*s.* c.i.f.

**SODA CAUSTIC** is firm, one of the principal makers having sold his output for this year: 77 per cent. white is quoted 11*l.* 2*s.* 6*d.* to 11*l.* 5*s.*, 76 to 77 per cent. 11*l.*, 72 per cent. 10*l.* 10*s.*, and 70 to 72 per cent. 10*l.* 5*s.* per ton f.o.r. makers' works Lancashire.

**TRAGACANTH.**—A fair business has been done at steady prices, principally in the lower grades. Stocks, although heavy, leave a poor selection, but some 1,500 packages are close at hand, when an improvement in choice and demand may be expected. Bagdad firsts are quoted 15*l.* 5*s.* to 16*l.*, seconds 14*l.* to 14*l.* 15*s.*, thirds 11*l.* to 13*l.*, and fourths 8*l.* 10*s.* to 10*l.* per cwt.

**TURPENTINE** has been irregular, closing at 40*s.* 6*d.* per cwt. for American, which has been paid.

**London Drug-auctions.**

The offerings of first-hand drugs at auction met with a poor reception, only a small proportion selling, with few price-alterations. Apart from the new Tinnevelly senna, however, very little of interest was offered, several of the leading staples, such as Cape aloes, benzoin, Jamaica honey, and wax and sarsaparilla being absent. Zanzibar aloes in skins and tins were plentiful, but buyers and sellers are wide apart in their views. Buchu sold steadily. Sumatra benzoin was uninteresting, and cardamoms only partly sold at a decline of 1d. to 2d. per lb. on bold sizes, but small tended firmer. Seed was steady. Siam gamboge tended firmer, especially pickings. Ipecacuanha was easier inclined. Rhubarb was quiet and easy. New Tinnevelly senna met with keen competition at an advance of  $\frac{1}{4}$ d. to  $\frac{1}{2}$ d. per lb., and occasionally more, quality being better than usual. Beeswax was flat. The following table shows the quantity of goods offered and sold, the asterisk denoting private sales:

	Offered Sold		Offered Sold
<b>Aloes—</b>		<b>Ipecacuanha—</b>	
Socotrine (kegs)	10 ... 0	Minas	2 ... *2
Zanzibar	72 ... 0	Jambul-seed	5 ... 0
Ambergis (pkgs.)	1 ... 0	Kola	1 ... 1
Aniseed (Rus.)	20 ... 0	Lime-juice	10 ... 0
Aniseed, Star	17 ... 10	Mango-ove-bark	1 ... 0
Asafetida	2 ... 0	Myrrh	32 ... 0
Bael-fruit	5 ... 0	Nux vomica	19 ... 0
Balsam (Peru)	29 ... 0	Oil—	
Benzoin—		anise, star	5 ... 0
Sumatra	30 ... 18	cinnamon	3 ... 0
Buchu	18 ... 18	eucalyptus	20 ... 0
Calumba	31 ... 18	lemongrass	2 ... 2
Camphor—		peppermint	12 ... 0
Ch. cr.	9 ... 0	Olibanum	60 ... 0
Jap. ref.	12 ... 3	Orange-peel	4 ... 0
Canella alba	5 ... 0	Ochella weed	16 ... 16
Cannabis indica	2 ... 0	Quillaia	40 ... 0
Cardamoms	192 ... 100	Rhubarb (China)	34 ... 3
Cascara sagrada	143 ... 0	Sandalwood	55 ... 0
Cascarilla	25 ... 0	Sarsaparilla—	
Cashew-nuts	39 ... *18	Lima Jani	8 ... 2
Cassia fistula	4 ... 0	Scammonium	2 ... 0
Cinchona	6 ... 0	Seedlac	172 ... 0
Coca-leaves	20 ... 0	Senega	3 ... 0
Cochineal	6 ... 6	Senna and pods—	
Cubebs	25 ... 0	Alex.	79 ... 4
Cumin-seed	20 ... 0	Tinnevelly	823 ... 806
Cuttlefish-bone	47 ... 47	Starch flour	50 ... 50
Dill-seed	20 ... 0	Styrax	1 ... 0
Dragon's-blood	8 ... 0	Tamarinds	27 ... 0
Eleuth.	20 ... 0	Tragacanth	1 ... 1
Gamboge	8 ... 5	Turneric	196 ... 0
Gentian	20 ... 20	Turtle, dried	1 ... 0
Gum arabic	71 ... 11	Wax (bees)—	
Henbane (Russ.)	4 ... 0	Australian	10 ... 1
Honey—		East African	10 ... 0
Mexican	7 ... 0	East Indian	86 ... 0
Insect-flowers	2 ... 0	Madagascar	225 ... 0
Ipecacuanha—		Rangoon	9 ... 0
Cartagena	7 ... 3	Span'ish	6 ... 0
Matto Grosso	24 ... 20	Zanzibar	152 ... 0

**ALOES.**—A parcel of forty-five cases of Zanzibar in tins in cases was offered, the bulk of which consisted of good aloes, but in a soft and liquid condition (the parcel containing an unusual percentage of water), which greatly detracted from the value. They were bought in at the nominal price of 75s., buyers' idea of value considerably less. For fair hard Zanzibar in skins 52s. 6d. was refused, and for good stiff Socotrine in kegs 90s. was wanted.

**ANISEED, STAR.**—Ten cases of fair Chinese sold at 75s. per cwt.

**BAEL FRUIT.**—Five bales of fair dried slices were retired at 6d. per lb.

**BALSAM, PERU.**—Eight cases good thick from Acajutla were bought in at 7s., the selling price being 6s. 9d. per lb.

**BENZOIN.**—The offerings were quite unimportant. Eighteen cases of fair Sumatra seconds with small to bold almonds and slightly false packed ends sold at 6s. 10s. per cwt.

**BUCHU.**—Steady for round, but longs were  $\frac{1}{2}$ d. to  $\frac{3}{4}$ d. dearer as compared with last auction. Five bales fair to good small round green sold at from 1s. 4d. to 1s. 6d., six bales of fair longs at 8 $\frac{1}{4}$ d. to 8 $\frac{3}{4}$ d., and five bales bronzy ovals at 8d. per lb.

**CALUMBA.**—Sixteen bags, small to bold, partly wormy natural sorts sold at 15s., and 2 bales sea-damaged at 12s.;

13 bales of ordinary darkish washed were held at 20s., a bid of 14s. being refused.

**CANNABIS INDICA.**—Two cases fair Bombay tops were held at 5s. per lb., at which small sales have been made privately.

**CARDAMOMS.**—Quiet. The bold sizes sold 1d. to 2d. per lb. cheaper, but small and medium tended firmer. Seed was steady. Ceylon-Mysore, good bold pale, sold at 2s. 5d.; medium and bold palish to pale, 1s. 9d. to 1s. 11d.; small and medium palish to pale, 1s. 6d. to 1s. 8d.; small dull, 1s. 4d.; brown and split, 1s. 4d. *Splits*, bold, pale, 2s. 1d.; small ditto, 1s. 6d. to 1s. 7d.; fair seed was bought in at 1s. 9d., and privately 1s. 8d. has been paid.

The exports from Ceylon during the period January 1 to August 2 amounted to 395,214 lb., against 359,977 lb. in 1908, 463,877 lb. in 1907, and 443,383 lb. in 1906. Exports to the United Kingdom have increased from 117,358 lb. in 1908 to 190,009 lb. in 1909, while exports to India fell from 176,916 lb. in 1908 to 53,658 lb. in 1909. Germany increased her imports from 26,352 lb. to 63,076 lb. in 1909, and the U.S.A. from 993 lb. in 1908 to 43,037 lb. in 1909.

**CASCARILLA.**—Fifteen barrels of siftings were held for 50s.

**CASSIA FISTULA.**—Four cases of fair pod from St. Lucia were retired at 20s.

**CINCHONA.**—Six serons fair Huancayo quill were bought in at 7d., a bid of 5d. being refused.

**COCHINEAL.**—Four bags Teneriffe silvers sold at 10d. to 10 $\frac{1}{2}$ d., a bag of silver-grey at 10d., and one of grey at 9d. per lb.

**CUEBBS.**—Twenty bags of genuine were offered and bought in at the nominal figure of 6l. 10s. per cwt., and another lot of similar quality was held at 5l. 10s.

**CUTTLEFISH BONE.**—Steady. Twenty-two bales of small to bold good pale Bombay bone sold at 4d., 11 bales of bold dullish and damp at 2 $\frac{1}{2}$ d., and 7 bales of very small broken dampish at 2 $\frac{1}{4}$ d. per lb.

**DRAGON'S-BLOOD.**—Fair re-boiled Singapore lump was held at 11l. 10s., and fair pickings at 8l., a bid of 7l. 10s. being refused for the latter.

**GAMBOGE.**—Firmer. Four cases of good Siam pipe, slightly blocky, sold at from 14l. 15s. to 14l. 17s. 6d., and a case of pickings realised 12l. per cwt., the latter being dear.

**GENTIAN.**—Twenty bags fair sold partly without reserve at 18s. 6d. per cwt.

**HENBANE.**—Four bales of the new Russian crop of very fair flavour was offered, the price of which was 40s. per cwt. gross for net.

**HONEY.**—No Jamaica was catalogued, the sale offering consisting of seven casks Mexican of common dark brown quality, for which 23s. was wanted, a bid of 22s. being refused.

**IPECACUANHA.**—Slightly easier but in fair demand. A new lot of twenty-two bales Matto Grosso of much better quality than usual, practically all sold, including fair to good bright plump natural at from 5s. 8d. to 5s. 10d.; ordinary dull lean 5s. 5d. to 5s. 6d.; and sea-damaged 5s. 2d. to 5s. 7d. per lb. A single bale of ordinary lean Cartagena realised 4s. 3d., and from another catalogue four bags of mostly common lean woody Cartagena sold at from 3s. 9d. to 4s., and two bales of ordinary lean Minas had been sold privately. For two bales of wiry Matto Grosso pickings no bid was made, although offered without reserve.

**KOLA.**—A single bag of small and medium dried Jamaica sold at 2 $\frac{1}{4}$ d. per lb.

**LIME-JUICE.**—Ten puncheons of fair pale raw Dominican were held at 1s. 3d. per gal.

**MYRRH.**—Fair slightly blocky Aden sorts were offered at 70s. per cwt.

**OIL, LEMONGRASS.**—Two cases of Java containing 75 per cent. of citral, according to Dutch analysis, apparently sold at 2d. per oz.

**ORCHELLA-WEED.**—Sixteen bales sea-damaged found a buyer at 4s. per cwt. without reserve.

**RHEUBARB.**—Quiet. Three cases of small and medium round orange-coated Shensi, with seven-eighths good pinky

fracture sold at 1s. 8d. per lb. Bold round Shensi was held at 2s. 2d., and the same price was asked for small round and druggists' trimming root, with three-quarters good pinky fracture. Small rough round High-dried was held at from 5½d. to 6d. per lb. No Canton or flat High-dried was offered, and privately the former is scarce, there being practically nothing in the warehouse.

**SARAPARILLA.**—No grey or native Jamaica was offered, the auction consisting of eight bales of Lima Jamaica, small sales of which were made at 1s. per lb. for fair. Privately the first-hand supplies of grey (about twenty-two bales) have now been cleared in a line at 1s. 2d. per lb.

**SENNA.**—The moderate quantity of 823 bales new crop Tinnevelly was offered to-day, the bulk consisting of very fair quality, the best that has been seen for many months. An unusual proportion, however, was so-called sea-damaged, much of it Class 3. The probability is that it was country-damaged as the result of hasty packing. Buyers showed keen competition, and practically all sold at an irregular advance of ¼d. to ½d. per lb., and occasionally more. Good bold greenish leaf sold at from 4d. to 4½d., medium greenish ditto 3½d. to 3¾d., small and medium greenish 2½d. to 3d., and common small yellowish specky to ordinary 1½d. to 2d. per lb. Pods sold at from 2½d. to 3½d., as to quality. Of Alexandrian, 75 bales of ordinary darkish broken leaf were held at 2½d. per lb., and for four bales of ordinary flimsy pods 5d. was paid without reserve.

**STARCH FLOUR.**—Fifty bags (about 5 tons) sold at 4s. 6d. per cwt. net and gross for net.

**WAX (BEE'S).**—No demand. Fair brown Zanzibar block and Madagascar ditto (about 375 packages) were held at 6d. 15s. per cwt. Bleached Calcutta was retired at from 6d. 7s. 6d. to 7d. 12s. 6d. for common dull to good white; and fair Bombay was held at 6d. 5s. A single case of Australian sold at 8d. per cwt. No Jamaica offered.

### Heavy Chemicals.

The heavy-chemical market is still rather on the dull side, new business being specially quiet, and this applies at practically all the centres of the industry. At the same time inquiries seem rather more numerous, so that an increase in business seems probable, and the market maintains a steady tone. It seems likely that exports to Sweden will recommence very early, and this will make a difference. Prices are on the steady side, and show very little fluctuation.

**SULPHUR OF AMMONIA.**—There has been a very good demand, especially for prompt parcels, and prices are steady with slight improvement. Present market figures: Beckton prompt, 11s. 7s. 6d.; Beckton terms, 11s. to 11s. 1s. 3d.; London, 11s.; Leith, 11s. 3d.; Liverpool, 11s. 2s. 6d.; to 11s. 3s. 9d.; and Hull, 11s. Rather better business has been done on forward account for delivery over this year at about 2s. 6d. over present figures. For delivery during the early months of next year about 11s. 10s. is the mark.

**BENZOLS.**—There is a fair demand in this market, though business is somewhat restricted by the prices asked by makers; 90-per-cent. stands 5¾ to 6¾, and 50-per-cent. 6¾ to 7¼, according to market.

**BARIUM PRODUCTS** call for little special remark. Generally speaking, there is a good average demand, and prices are well maintained. The mineral carbonate of barytes continues very scarce and firm, and all business is subject to special arrangement regarding delivery, etc. Blanc fixe, pure precipitated sulphate of barytes in paste form, 6d. 15s. to 7d. 10s. per ton in usual casks. Mineral sulphate of barytes varies from 40s. to 100s. per ton, according to quality, quantity, and package. Chloride of barium ordinary refined crystals in casks, 7l. to 7l. 10s. per ton; crude calcined sulphide of barium, 70 to 75 per cent., 5l. 5s. to 5l. 17s. 6d. per ton. Hydrate of barium purest crystals somewhat quiet at 13l. 5s. to 14l. 5s. per ton in 6/7-cwt. casks. Fused concentrated barium hydrate solid 56 to 60 per cent. BaO in 5/6-cwt. drums, 13l. 15s. to 15l. per ton. Crushed concentrated quality in special drums about 3 cwt. each, 30s. per ton extra.

### Manchester Chemical-market.

August 24.

Heavy chemicals are fairly steady, with a better inquiry for export account. Low-strength caustic soda appears to be moving better. The demand for sulphate of copper, especially on speculative account, has slackened off, and for forward delivery there is a little business passing. White powdered arsenic is reported in better inquiry for forward delivery, and makers are not anxious sellers; but for prompt, prices continue in buyers' favour. Quotations are lower for Russian carbonate of potash, and the demand has improved somewhat. Price of German, however, is prohibitive. Re-

fined German is 17l. 5s. per ton, ex store Hull; Russian, 90 to 92 per cent., 16l. 10s. ex store Manchester, Hull, and Liverpool. Yellow prussiate of potash is easier, and brown acetate of lime is firm. Permanganate of potash is quiet. The recent advance in glycerin (B.P. s.g. 1.200) has not been very favourably received here. Offers for erude have been rejected at certain advances, say 52l. to 53l. per ton. In farina a steady spot demand is reported; superior Dutch and German ditto are quoted 14l., ex store Goole and Manchester.

### Continental Drug and Chemical Markets.

**CHLOROFORM** has long been subject to uniform prices on the part of makers, and these have remained unchanged for many months. The rise in raw material, however, brings with it the possibility of a rise in the quotations for chloroform, and the fact that of late a cheaper make has been found on the market does not alter this probability.

**DEXTRIN.**—Spot (Hamburg) business is very quiet, and prices have to be reduced in order to effect business. The general reports on the conditions of the potato crops show an improvement; the warm and sunny weather should also develop the starch contents of the tuber, and a downward tendency in prices is looked for.

**HYDRASTIS.**—Despite the present high prices a good consumption is noted, several sales being made immediately the goods were landed. Spot is held at 19m., and for shipment 17m. to 17.25m. per kilo, is quoted, according to quantity.

**SANTONIN.**—The small stocks in Hamburg are held for an advance, to-day's price for retail lots being from 30m. to 32m. per kilo. Apart from this, the article appears to have reached a turning-point in view of the projected monopoly in raw material.

**TIN OXIDE.**—The associated makers have raised the price by 5m. per 100 kilos. The metal has shown a marked improvement in the past week, chiefly because of increased demand from America, otherwise account must still be taken of a fluctuating tendency in this article.

**WORMSEED.**—The reports as to a possible monopoly in wormseed, the idea of which has long been entertained by interested parties, has recently brought about an active demand in Hamburg, and prices for good green have risen to 50m., current qualities offering at 45m. Further developments depend entirely on the confirmation of the reports of a monopoly.

### Cablegrams.

**SMYRNA**, August 25:—Large sales of opium have been made to speculators and to the United States at the equivalent of 12s. per lb. for 11 per cent., the market closing with an advancing tendency.

**NEW YORK**, August 26:—Business in drugs is fair. Opium is nominal at \$4.20 per lb. for druggists'. Cascara sagrada, at 8c., is slow; hydrastis (golden seal) is 10c. dearer at \$1.35. Peppermint oil in tins is steady at \$1.45; Central and South American copaiba remains easy at 42c. per lb.; Peru balsam is also easy at \$1.50; podophyllum (manorake) is firm at 8c.; and jalap is steady at 45c. per lb.

**AMSTERDAM**, August 26.—At the auction of cinchona held to-day 10,881 packages were offered, of which 9,716 packages sold at an average unit of 3c. per half-kilo, against 3.15c. paid at the auction on July 15. The following were the approximate quantities of quinine purchased by the principal buyers: (1) The English and American factories, 15,455 kilos.; (2) the Brunswick factory, 7,372 kilos.; (3) the Mannheim factory, 4,981 kilos.; (4) the Amsterdam factory, 2,372 kilos.; (5) the Frankfort and Stuttgart factories, 5,241 kilos.; (6) the Maarssen factory, 6,792 kilos.; (7) various buyers, 13,484 kilos. The lowest price paid for manufacturing bark was 6¾c., and the highest 35c., while for druggists' bark from 5c. to 39c. was paid. The coca-leaves sold at from 39½c. to 67½c. per half-kilo.

### Exports of Spirits to India.

To comply with a requirement attending the importation of spirits into India, the Commissioners of Customs have issued a General Order notifying exporters that they can obtain a certificate of shipment for spirits exported from this country. The Order states:

Officers concerned are authorised to certify, without charge, on a memorandum setting forth particulars of any shipment of spirits to India that such consignment has been delivered for exportation to that country. The memorandum is to be prepared by the exporter, and must agree with the official account. The particulars set forth in the memorandum are to be compared with the official account, and if they are accurately set forth, a certificate may be given at foot of the memorandum: "Goods as above described have this day been delivered from bond for exportation to India."



**TO CORRESPONDENTS.**—A letter for publication should always be a distinct communication; nothing else should be mixed up with it. Each query—no matter whether legal, dispensing, or general—should stand by itself, and the paper upon which it is written should always be backed with the shop stamp. We do not undertake to reply to queries by post. Write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. Publication of letters does not imply our agreement with them. Letters received after Wednesday morning cannot as a rule be dealt with in the current week's issue.

**BUSINESS INFORMATION.**—We supply by post (when a stamped and addressed envelope is provided) information as to the makers or agents for articles connected with pharmacy and the chemical and drug trades. Inquiries regarding any articles which cannot be traced are inserted under "Information Wanted."

#### Podophyllum Emodi.

SIR,—The report of the Indian Indigenous Drug Committee, reviewed in your article in THE CHEMIST AND DRUGGIST, August 21, 1909, p. 343, is of very considerable interest, and the results published dealing with *Podophyllum Emodi* clearly call for still further investigation of that drug. I was the first to publish in this country the results of an extended examination of the constituents of the resin of *P. Emodi*, and to show its close relationship with that of *P. peltatum*, as well as the important differences. From that time forward, as mentioned in your review, opinions have wavered; and, tabulating these differences of opinion, I think it must be obvious that, with the reputation of the authors who have published them, the results indicate a great difference in the proportion of resin, its constitution, and its activity according to the time of the year that the drug has been collected, or the conditions under which it has been marketed. The following paragraphs summarise what has been published:

*Year-book of Pharmacy*, 1890, p. 146.—Thompson refers to Dynock and Hooper's statement that it contains 12 per cent. of amorphous resins, and that when given in doses of  $\frac{1}{2}$  grain it produced slight griping sensations. Thompson states that it contains 25 per cent. more podophyllotoxin than the American, and that the Indian would be worth  $2\frac{1}{2}$  times the value.

*Year-book of Pharmacy*, 1892, p. 393.—J. C. Umney states that *P. Emodi* yields nearly double the amount of resin yielded by *P. peltatum*, but that it contains only about half the quantity of crystalline picropodophyllin, to which its value as a cathartic is due. It is not at all active.—John Moss confirmed this statement, and said that he found its action most capricious—sometimes it was effective, and sometimes with the same person it was not, and it varied also with different persons. He quite agreed that it was not desirable to add it to the *materia medica*.

*Year-book of Pharmacy*, 1898, p. 136.—Dunstan and Henry state that Indian podophyllum contains from 9 to 12 per cent. of resin, and the American 4 to 5 per cent., and that the two resins have been proved to be equally valuable therapeutic agents. The amount of crystalline podophyllotoxin in the Indian plant varies from 2 to 5 per cent., while samples of the American rhizome were found to contain rather less than 1 per cent.

*Year-book of Pharmacy*, 1899, p. 162.—Mackenzie and Dixon state that resin from the Indian drug is found more active; doses not exceeding  $\frac{1}{2}$  grain act better than large doses. Indian podophyllin is an active purgative and a useful therapeutic agent. It may be substituted for *P. peltatum*.

*Year-book of Pharmacy*, 1903, p. 230.—Dott says there is still a certain amount of obscurity about the chemistry of podophyllin. Some say that podophyllotoxin is the active principle, others picropodophyllin. Although the latter is stated to be poisonous, its pharmacological value and relationship to podophyllotoxin have not been clearly stated.

*Year-book of Pharmacy*, 1903, p. 232.—The Editor of the "Year-book" (Mr. J. O. Braithwaite) mentions that in two cases gradually increased doses of the freshly precipi-

tated resin of the *P. Emodi* have been absolutely inert, even when amounting to 3 grains. The resin in question was that investigated by J. C. Umney.

*The Chemist and Druggist*, April 18, 1903.—Dr. Henry states that picropodophyllin is formed from podophyllotoxin in ammonia solution and separates in flocks a few minutes after dissolving. Neither the American nor the Indian drug contains picropodophyllin in the natural state.

In the final report, now published by the committee referred to, the following statements are made.

Hospital Assistant, Gunabhiram Das, Military Police Hospital, Aijal, finds its purgative action is better than podophyllum resin, as the drug does not produce griping.

Captain William Anderson, Parachinar Civil Hospital, Kurram, finds the resin requires to be given in doses of  $1\frac{1}{2}$  to 2 grains, and that it is liable at times to gripe and even to cause vomiting.

Lieut. Hyde Hills and Lieut. Brook Churchill consider Indian podophyllin rather a drastic purge in doses of 1 to  $1\frac{1}{2}$  grain.

Major Sutherland, Mayo Hospital, Lahore, finds it about equal in value to the pharmacopoeial resin.

These doses are from two to four times as much as are given in this country of the resin of *Podophyllum peltatum*, and should produce, naturally, considerable purging, etc. I consider a further investigation of the subject is necessary, and now that we are actively engaged on the revision of the British Pharmacopoeia, there should be placed at the service of the committee samples of Indian podophyllum-root obtained from the various districts and altitudes in India, collected at different periods of the year, and dried under constant conditions. The great preference given to "fall-dug" rhizome in America is based upon the considerable difference in the proportion of resin and, to some extent, on difference of its constitution.

Yours faithfully,

JOHN C. UMLEY.

48 Southwark Street, London, S.E., August 23.

#### Store-prices.

SIR,—In reply to Messrs. Oppenheimer's letter in *C. & D.*, I would like to mention that the Army and Navy Stores "dispense" all palatinoids, tabloids, etc., in original bottles at list prices. Original bottles of other proprietary articles are "dispensed" at store-prices.

Yours faithfully,

AN OLD DISPENSER. (142/63.)

#### Sweet Oil.

SIR,—Surely you must be wrong by informing a correspondent that sweet oil is generally colza. During a business life of well over forty years in various parts of the country I have never once seen it sold as such. Olive oil is the correct thing, I should say.

Yours, VETERAN. (142/31.)

[We have no objection to take a vote on the matter. Would subscribers please tell us on postcards what their experience is? We said that colza oil is generally given, and olive oil sometimes.—EDITOR *C. & D.*]

#### Commercial Travellers' Calls.

SIR,—May I ventilate a grievance which is felt by almost every suburban chemist? I refer to the habit many travellers have of calling at mealtimes. I have been in business in suburban London for over ten years, and am not exaggerating when I say I have at least four travellers calling every week between 1 and 2 P.M. This is a distinct grievance which I believe 90 per cent. of suburban chemists have against their wholesale houses. One does not like to be abrupt with such callers whose principals serve one well, but I often feel that many a man has left my shop with only half the order he would have had had he called at a more reasonable hour. I have noticed out of London that representatives of quite small houses never call between 12.30 and 2.30 P.M., and never after 4 P.M., or earlier than 10 A.M. Why therefore should a London chemist, paying monthly as compared with the quarterly settlements of the former, be pestered by travellers every moment of the day from 9 A.M. to 7 P.M.? I like to see travellers; they keep me in touch with the trade generally; but they might at least allow me to take my midday meal in peace.

Yours faithfully,

SUBURBAN CHEMIST. (140/31.)

**Doctors and Chemists.**

SIR.—The following might be of interest to other chemists. A customer came to me and asked for a quotation for a certain brand of natural aperient water. A quotation was duly given, but judge of my surprise when to-day I was informed by the customer that her doctor had arranged to supply her personally. This I consider quite wrong, and a deliberate attempt to take the bread out of the chemist's mouth. I shall go on prescribing as hard as ever I can now, and shall consider myself as much a "professional" man as the doctor.

Yours truly,

London, S.W., August 24. SUBSCRIBER. (144/51.)

**Apothecaries' Assistants.**

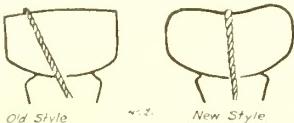
SIR.—The Pharmaceutical Society should certainly register holders of the Apothecaries' Assistants' certificate, provided they (1) have passed an approved Preliminary, (2) have served a three-years' apprenticeship with a qualified chemist and druggist or apothecary, (3) are twenty-one years of age, and (4) have paid the Society a registration-fee of 10/- 10s. The public would be protected; the Society would lose nothing—on the contrary, it would gain a great deal; and the large stores and "co-ops." would have more opposition to contend with. Although the examinations for the M.B. are more stringent than those for a Licence in medicine and surgery, the Medical Council treats graduates and diplomates alike as far as registration is concerned.

Yours truly,

A. G. (143/70.)

**A Suggestion in Stoppers.**

SIR.—Kindly allow space in your influential journal to suggest an improvement in the glass stoppers used for such chemicals as liq. ammon. fort., ether, chloroform, spt. aeth. nit., and all the B.P. strong acids. With the stoppers at present in use it is almost impossible to secure them properly. I send a drawing of an improved stopper with a



depression in it which will have the effect of securing the twine used in tying the stopper down. I hope the various manufacturers of these chemicals will consider my proposal a good one.

Yours faithfully,

Dublin, August 21.

F. J. MILLER, L.P.S.I.

**Past and Present.**

SIR.—Jay Mack has evidently small respect for the past, but possibly the trade aspect only has interest for him. So far as pharmacy is concerned, we have in many respects been going backwards for some time, and I see few signs of improvement. Many years ago, in my first assistantship, I made all the B.P. requirements of the business, and did the dispensing—about thirty to forty prescriptions a day. I do not remember any drug then used of an extraneous nature beyond Battley's solution of opium, Schacht's bismuth, and one or two others. At that time the Minor examination was closely related to one's work, and I left my Pharmacopœia, well thumbed and dog-eared, on the counter when I went up to Bloomsbury for my examination, and found it there when I returned. I was with a big London West-end firm where three of us were dispensing all day long as hard as we could go—all solid work. What is it now? You have to be well up in the B.P. for the examination, but in the dispensing department an intimate knowledge of three or four proprietary drug-lists is more to the point. Ask for the high-class pharmacy, and it will be to a certainty the place where a full line is kept of someone's elixirs or tablets, and that is high-class pharmacy! There is a prejudice in many quarters against "patents," but at the least they contribute something to the State. At the present time we dispense a large variety of eclectic preparations, which ought also to be in the same category. In fact, I am of opinion that if all of these proprietaries were compelled to be stamped and sold entire it would

be the better for pharmacy. There is no essential difference between, say, "R. Pil. 1909 (A. B. & Co.), LX," and "R. Pil. (Beecham) 1 box," certainly no more skill is required in dispensing them. But the chief consideration for chemists lies in the danger of selling in our own bottles, and labelled with our own labels, liquors, elixirs, etc., of the composition of which we are ignorant. We place ourselves in a helpless and undignified position by consenting to such a proceeding. There are in frequent use narcotics of proprietary origin which are very powerful—much more so than prescribers are aware of. For some persons they may be suitable, for others they are dangerous; and I know of one case in which the patient was made seriously ill by taking a few doses of such. All the dispenser had to do with the matter was to fill a small bottle with "Liquor —— (X. Y. and Z.)" from an original bottle and label as ordered by the doctor. The result was as stated, and by inference the dispenser got the blame, and the chemist lost a customer. I am confident that this happens oftener than we have any idea of, and we should take steps to mitigate the evil. Messrs. Oppenheimer's letter in this week's issue makes it clear that they wish us to put our labels on, or, in other words, their name to be obliterated. I do not agree. If the doctor orders Oppenheimer or any other pills or what not, let them go out as Oppenheimer's or the maker's name whatever it may be. Another point: do not omit the patent-medicine stamp wherever this is necessary. Some little deceptions in dealing with the patient is of course at times quite legitimate, and we willingly take part in it. But when a doctor can find no better remedy than some ready-made put-up stuff, occasionally with a stamp upon it, we shall be well advised to let it go out as it is, and take no risks. Pharmacy is being throttled with proprietaries, and we shall do little good until this matter is tackled. I have no objection to proprietaries as such, but keep them in their proper place—close to the patents.

NUDA VERITAS. (145/90.)

**Stock-taking.**

SIR.—I have been very much interested in the letters and articles of Jay Mack, so that, if he can spend the time, I should like very much to know his system of stock-taking. I am not in a large way of business, but still I have an enormous number of different items totalling up, which are bound to take a long time in detailing and the subsequent working out. Does he weigh every drug and measure other liquids? Again, there is the question of the packing: Does he count the pillboxes, etc.? If so, the time taken every three months must be considerable. Anyhow, I should like to know his system and the working-out out of the profits.

WRIGHT TACK. (145/12.)

**What to Sell.**

SIR.—Mr. Mortimer touches a vital point in his letter in last week's issue. The question what to sell is an important one, and every chemist lending his aid in the distribution of unprotected articles is pickling a rod that will be used to beat him at some future time. Advertisers of patent medicines are bound to get their goods stocked by chemists; no other trader is any use to them at the start, but once the chemist has assisted to make the sale there are many grocers working on small expenses who are ready and anxious to pick up a few crumbs by cutting the price or giving rebates. Now, Mr. Mortimer instances goods supposed to be protected on which dividend is paid in his town, and has called attention to the danger which chemists run by making a sale for a proprietary owned by a wholesale house. I know of many similar instances. What is the P.A.T.A. doing? I contend that this Association is lulling the chemist into a sense of false security, and encouraging the sneaking trader to filch trade from his honest rival, who believes that because the article is on the P.A.T.A. list it cannot be cut. This dispute as to the giving of "Divi." by Co-ops. ought to have been settled months ago; either it is wrong or it is right; why do not the P.A.T.A. stop supplies if the principle is wrong? Are they unable to do this? Where is their power if they cannot stop this, and of what use are they to the trade? I am a believer in protection, and thank the P.A.T.A. for

many good works, but lately they seem to have gone to sleep. Nowadays we are advised to sell any rubbish which is protected at a so-called 20 per cent. How many of these P.A.T.A. goods give us 20 per cent.? Calculate for yourselves, readers. How many are nearer 10 per cent.? What are your working expenses? Nearer 20 than 10 per cent. Do we realise that many of these "Protected Goods" do not bear their proportion of working expenses and are really a loss to us? Why not put a little concerted work into the proprietary problem this coming winter season? Advertisers will offer us adequate terms when they feel our power, not before.

Yours,  
HAROLD MILLER.

Cheltenham, August 25.

[Our correspondent also comments on the United Chemists' Association's proposed specialities.—EDITOR C. & D.]

#### The late Mr. Bottone.

SIR,—Science has lost one of its most devoted promulgators in the removal of Mr. Selimo Romeo Bottone, born in London, November 24, 1839. His father, Count Emilio Bottone di San Giuseppe, an Italian, was a political exile for taking part in the revolutionary movement in 1821. Selimo was articled to Mr. Henry Deane, of Clapham Common, and was distinguished by assiduity in pharmacy and collateral science; he did not, however, stick to the craft, but found himself more at home in the study of mathematics and constructiveness. He became Editor of the "English Mechanic." Resigning this office, he eventually established at Wallington a manufactory for electrical apparatus, in which he succeeded to an extraordinary degree. A distinguishing feature of Bottone was candour and a desire to diffuse knowledge. With this object in view, he published a shilling pamphlet, "How to make a Dynamo." His latest literary work was "Radium and all about it." Both were written in a plain, popular style, which induced many an amateur to experiment with greater or less success. Bottone was always ready to answer and assist by advice. Contemporary with this master spirit were Mr. James Gunn, of Fenchurch Street; Mr. Mackerell, Mr. Sturgeon, and Mr. Pollock, Ph.C., humorously styled "the electrical fishes." At the same period, Mr. Wm. Hy. Weekes, of Sandwich, and Mr. Crosse, a Yorkshire scientist, were carrying on their magnificent scheme of wireless electricity. There can be no doubt but that these two ardent lovers of natural science were the pioneers of Marconi and his followers. I cannot conclude my short notice of my friend without a word regarding his *personelle*. In features he much resembled Chateaubriand—in manners sprightly and witty, a good conversationalist, an excellent musician, a pianist and organist, also performing with much skill on the violin. He was well versed in foreign languages, but remarkably unostentatious, accommodating himself to any society. Bottone's business at Wallington is now carried on by his son, who inherits much of the father's talent.

SIRIUS. (142/15.)

#### A Chemist's Business Year.

SIR,—The question of the percentage of net profit on a business has always been an interesting one to me, and I have noticed that businesses for sale are generally said to show 33½ per cent. net profit. For my part, I have always had to be content if I can realise nearer 25 per cent. No doubt a great deal depends upon the class of business one does, and also upon what one considers legitimate business expenses. A high-class dispensing establishment ought to show a larger percentage of net profit than 33½, so ought a business composed chiefly of proprietaries; but I am convinced that the majority of ordinary chemists' businesses yield only about 25 per cent. Below I give figures from what could be described as a middle-class light retail, which is worked with an apprentice and a boy. Prescriptions and repeats number only 400 per annum. The business is in a large village within easy access by tram of a large manufacturing town, hence prices are ruled by the stores in town, which means that "patents" are cut to the lowest level. Optics form a profitable side-line, but business in this is very limited. The fact that the balance-sheet for June 1909 (a year which has been one of undoubtedly bad trade) is much better than

that for June 1908 is a matter for congratulation. The aim for the year 1908 to 1909 was for a turnover of 1,200/- with a net profit of 300/- The accomplishment was really better than the aim in getting a larger profit from a smaller turnover. Stock is carefully taken annually, and its value comes to very much the same each year. It is a peculiar coincidence that the stock in June 1909 amounted to exactly the same figure as in June 1907. The increase of net profit by 53/- has been realised by pushing good-paying proprietaries—not unduly, but judiciously. Sixteen special lines are kept conspicuously to the front, the sale for one only amounting to 720 in one record month. The figures from this business will show that with hard work and push the drug-trade will still give a decent living. The aim for the next balance-sheet is for a profit of 350/- from a turnover exceeding 1,200/. The neighbourhood is not a growing one, so that one has to be satisfied with a slow increase. Hoping that these figures will interest my "brother chips" sufficiently to make them do the same,

I am, yours truly,

A WORKER. (105/9.)

#### TRADING ACCOUNT, JUNE 1908.

Stock, 1907 ... £331 3 3	Cash Takings, July 1907 to June 1908 £1,157 12 11
Purchases for year ... 829 19 4	Debts due to me ... 40 16 5
Gross Profit ... 373 10 3	Stock, 1908 ... 336 3 6
	£1,154 12 10
	£1,154 12 10

#### PROFIT-AND-LOSS ACCOUNT.

Gross Profit as above £373 10 3	Rent ... ... ... £40 0 0
	Rates ... ... ... 8 18 0
	Wages ... ... ... 18 18 5
	Gas ... ... ... 4 18 0
	Carriage ... ... ... 7 15 10
	Advertisements ... 20 15 7
	Medicine-stamps ... 1 13 0
	Licences ... 3 16 3
	Bank Charges ... 0 15 9
	Sundry Expenses ... 5 14 4
	Net Profit ... 261 4 5
£373 10 3	£373 10 3

#### TRADING ACCOUNT, JUNE 1909.

Stock, 1908 ... £336 3 6	Cash Takings, July 1908 to June 1909 £1,193 6 0
Purchases for year ... 801 0 0	Debts due to me ... 39 1 0
Gross Profit ... 426 6 9	Stock, 1909 ... 331 3 3
£1,563 10 3	£1,563 10 3

#### PROFIT-AND-LOSS ACCOUNT.

Gross Profit as above £426 6 9	Rent ... ... ... £40 0 0
	Rates ... ... ... 9 0 0
	Wages ... ... ... 23 12 2
	Gas ... ... ... 5 14 5
	Carriage ... ... ... 10 1 9
	Advertisements ... 11 12 5
	Medicine-stamps ... 1 16 0
	Licences ... 3 16 3
	Bank Charges ... 0 15 11
	Sundry Expenses ... 5 19 0
	Net Profit ... 313 18 10
£426 6 9	£426 6 9

#### Ant-proofing.

SIR,—Many years ago I was consulted by a firm of organ-builders as to the best means of rendering the interior parts of a church-organ, to be sent abroad, proof against the attack of ants, as they had previously tried several devices but without avail. Once let these destructive insects get into the interior, and it is doomed, all parts falling a prey except the metal tubes. It is usual, I believe, to stand the supports of organs on blocks of stone with bowl-like cavities to hold water, and these kept constantly full, as a barrier to the inroads of these little pests.

We decided to try coating all the interior parts with arsenical paste, made as follows:

Dissolve 1 oz. arsenic in 5 oz. glycerin with the aid of a water-bath. When dissolved, mix with 2 oz. more of arsenic and about 16 oz. starch paste, and incorporate well together.

I spent several days at the work, going over all the interior parts two or three times with this paste, giving special care to the leathers, of which there are, of course, a great many in a complete organ.

I inquired some years after, and found that the organ was in good condition, and that the operation had been

effectual. No doubt the dissolved arsenic in the glycerin would penetrate into the body of the leather and wood, and the undissolved arsenic lay on the surface as a first line of defence.

Perhaps this experience may be of use to others of your readers.

Yours faithfully,  
WM. BOUSFIELD.

### Dispensing Notes.

#### Astringent Gargle.

SIR.—The following gargle will not keep: it turns flocculent. It makes no difference if distilled water is employed. It used to keep all right, but now gives trouble.

Yours truly, A. G. (138/31.)

Aluminis	...	...	...	gr. lxxij.
Ac. tannici	...	...	...	gr. lxvij.
Aq. ad	...	...	...	3vjij.

[We have failed to obtain the flocculence which you have observed in the gargle. When prepared with tap-water containing some calcium carbonate in solution, there is a granular deposit of lime salts after standing for two days; with distilled water it remains clear. There should not be a flocculent precipitate if the reaction of the alum be distinctly acid, as it usually is. Probably an impurity in the alum causes the trouble. It may be well to try some from another source. If the alum be only feebly acid, the addition of dilute sulphuric acid in *just sufficient* quantity to re-dissolve the flocculence will put the matter right.]

#### A Bismuth Mixture.

SIR.—Should the following mixture be clear or thick? Mine was quite clear, but the customer informed me that when made up before it had quite a sediment, and the bottle had to be shaken.

CODEINE. (140/2.)

Tr. nucis vom.	...	...	5j.
Sodii bicarb.	...	...	5ss.
Liq. bismuth. et ammon. eit.	...	...	3iv.
(Schacht) ...	...	...	3iv.
Inf. calumba conc.	...	...	3iv.
Spt. chlorof.	...	...	5j.
Aquam ad	...	...	3vij.

[This mixture should certainly be clear when first compounded, and it should remain clear for some days—probably long enough to let the patient finish it. On the third day after compounding a very faint haze is discernible when looking through it with the bottle standing edgeways. Precipitation will, we believe, ultimately occur, as it usually does in such mixtures; but in this case, the mixture being very dilute, it may require a considerable time.]

#### Bismuth-oxyiodide Precipitate.

SIR.—I should be obliged if you would let me know through the C. & D. whether the subjoined prescription can be dispensed without a brick-red precipitate being formed, which I take to be bismuth subiodide. If the precipitate cannot be prevented, should the mixture be dispensed?

Yours truly,  
BISMUTH. (142/70.)

Bismuth, salicyl.	...	...	5ij.
Ext. opii liq.	...	...	5ij.
Acid. hydrocyanic. dil.	...	...	5ss.
Potas. iodid.	...	...	5ij.
Aq. chlorof. ad	...	...	3vij.

5ss. t.i.d. a.c.

[This mixture cannot be dispensed without a brick-red precipitate of bismuth oxyiodide. We do not think, however, that there is any objection to the mixture being dispensed. Bismuth oxyiodide is, on account of its insolubility, probably less energetic in its iodine action than potassium iodide. The dose commonly stated in books is up to 10 grains. Even if all the iodine go over to the bismuth, the dose of bismuth oxyiodide in the mixture would not greatly exceed that quantity. The combination is unusual, but it makes a very pretty mixture. Our method is as follows: Make a mucilage in the usual way with 12 grains of tragacanth and about 6 oz. of the chloroform-water. With this rub down the bismuth salicylate perfectly smooth and transfer to a bottle; to this add, in three or four portions, the potassium iodide dissolved in about an ounce of water, shaking well after each portion is added; finally add the liquid extract of opium, dilute hydrocyanic acid, and chloroform-water sufficient to make 8 oz. The bismuth oxyiodide is formed slowly, and is very fine and easily diffused.]

### Legal Queries.

Before submitting questions for reply in this section please refer to the "C. & D. Diary, 1909" for the following subjects: Income-tax, p. 220; Pharmacy Law and Poisons, p. 216; (abroad) p. 211; Spirit Laws, p. 229; Stamped Medicines, p. 221; Trade-marks, p. 194; Wines, Sale of, p. 231; and Legal matters generally, p. 233.

**Shampoo** (140/36).—If a shampoo or any other preparation for the hair is advertised as "invaluable for headache," it becomes liable to medicine stamp-duty.

**Lex** (190/25).—If the corn-solvent is properly brought within the "known, admitted, and approved" remedies exemption you may recommend it in any manner you please, but be careful not to claim any proprietary right in it.

**Magnetic** (145/28).—Antipyrin powders labelled in the manner that you follow may be sold without stamp-duty by registered chemists and licensed medicine-vendors. In the case of entire drugs proprietary rights may be claimed.

**W. T. H. P.** (145/32).—In engaging chemists' assistants, it is assumed that the employé shall give diligent attention to his duties, and shall not neglect his employer's interests. This is not properly done when the assistant, during his employer's absence, spends his time in reading novels and delegates his duties to an errand-boy.

**Novice** (144/13).—The summons having been issued in respect to the debt, your best plan is to employ a lawyer to present all the facts to the County Court Judge. We cannot express an opinion on your liability without a copy of the order which you signed, and which can only be set aside by the Judge after hearing the evidence of misrepresentation which you may be able to submit.

**Nemo** (142/44).—(1) Salt of lemon and spirit of salt can be sold by unqualified persons, provided they label the articles in accordance to Section 5 of the Poisons and Pharmacy Act. (2) "Constipation cured. Send 1s. for our cascara tablets (tasteless)." This advertisement does not make the tablets liable to medicine stamp-duty if the tablets are composed solely of cascara sagrada extract, which is treated by the Revenue authorities as an entire drug.

**G. N. C.** (140/19).—Meat-and-malt wine cannot be sold without a wine-licence. The Revenue authorities have not laid down any rule as to the medicament of this preparation, and your best plan is to submit to them a sample of the ferrated wine (with the formula) which you desire to sell without a wine-licence. The amount of dialysed iron or iron citrate which you put in should not be less than the equivalent of 1 grain of metallic iron to the fluid ounce, which is the proportion required for vin. ferri.

**Viridis** (142/45).—The wide and indefinite terms of the lease do not, we fear, enable you to compel the landlord to paint the premises just when you please. The actual time should have been specified in the lease: "once during the occupancy" gives scope for evasion, but the landlord could be compelled by the Court to carry out the work within a reasonable time and in accordance with the requirements of the case. This could only be done by legal proceedings which, in any event, would probably cost you more than the painting of the premises—a fact that your landlord is probably aware of.

**R. M. L.** (138/39).—(1) None of the descriptions you refer to infringes Section 3 of the Dentists Act except "dental company." (2) The use of the word "pharmacy" by a person not registered under the Pharmacy Acts has been held by a county court judge to be illegal, but the decision is the subject of an appeal to the High Court which has not yet been heard. (3) The terms of the "all preparations and admixtures" entry in Part 2 of the new Schedule of Poisons bring within it stavesacre ointment, because it contains poisonous vegetable alkaloids. (4) We have heard of the Society which you mention, but its name does not appear in the London Directory, and, so far as we are aware, it is of quite secondary importance.

### Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months. A preliminary condition for reporting on samples submitted is that all particulars as to source and uses are given to us.

**Flynون** (170/18).—**PRESERVING MEAT.**—The spray used by butchers is generally solution of calcium bisulphite as supplied by makers. A 5-per-cent. solution of potassium metabisulphite is equally serviceable.

**Bert (144/32).—HEADACHE-POWDER.**—In the various combinations caffeine is a useless addition, it having been proved that it does not counteract any of the ill-effects of the analgesic. Phenacetin is the best and safest remedy, given in 3-grain doses, not more than three dozen to be given in twelve hours. The second dose may be taken an hour after the first, and the third three hours later, a small cup of tea being taken with each powder. There is a business advantage in giving phenacetin alone; being an entire drug no disclosure is requisite when it is recommended or named "Headache-powder."

**Cat (14/1).—LEMONADE CHARGE,** to be put into the lower vessel of a 5 pint seltzogene, along with the water:

Tartaric acid (powdered) ... 20 grains
Saccharin ... ... ... 1 grain

Add terpineless oil of lemon in the proportion of about 5 drops to the ounce of acid.

**M. G. R. (139/57).**—A little kieselguhr mixed with the salt-petre and blue vitriol would prevent or delay caking.

**Leather (142/42).—DUBBIN.**—The essential part of dubbin is the grease, to which it owes its property of waterproofing leather. It is the grease that makes polishing difficult, but the following recipe is stated to give a product which allows of subsequent blacking and polishing at once:

Russian tallow ... ... ... 5 lb.
Ceresine wax ... ... ... 5 lb.
Castor oil ... ... ... 3 lb.
Turpentine ... ... ... 1 pint

Melt the wax and add the turpentine. Separately melt the tallow and castor oil and mix with the wax and turpentine.

**Homo (106/24).—PERFUMING LIQUID PARAFFIN** for toilet purposes.—For this purpose the synthetic perfumes are generally employed. *Violet* is obtained by a mixture of ionone, musc, and a trace of vanillin. *Lily of the Valley*, synthetic muguet and benzyl acetate. *Jasmin*, benzyl acetate, musc with a trace of synthetic rose, and methyl anthranilate. *White lilac*, terpineol and muguet with musc. *Heliotropic*, heliotropin and coumarin. *Hyacinth*, hyacinthin and a little terpineol. *Jockey Club*, lyeoil, musc, and benzyl acetate.

**A. P. (106/64).—(1) PRESERVING PEAS.**—On a commercial scale the method consists of blanching and processing. The peas are first graded by passing over sieves with perforations of certain sizes, each size being kept by itself and separately treated. The blanching process has for its objects the removal of the mucous substance from the outside, and a part of the green colouring-matter, so as to have a clear liquor in the can, and also to drive water into the peas, so that all will be tender. The method consists in suspending the peas in a wire basket in a trough of hot water for from one and a half to two and a half minutes, according to the size of the peas. The blanched peas are then washed and filled into the cans or bottles and covered with a liquid having an average composition of sugar 10 lb., salt 10 lb., water 100 gals. The caps are then adjusted or soldered on and the tins or bottles "processed." This consists in slowly heating the tins in a solution of calcium chloride, or by other means, to 250° F., and maintaining the temperature for from twenty-five to thirty minutes, but the time may be longer in the case of hard, old peas. The object of processing is to kill the spores of the germs which induce fermentation. The sterilisation being completed, the tins are lifted out and rapidly cooled by sprinkling or immersing in water. (2) You can obtain a telephone from Messrs. F. Darton & Co., 142 St. John Street, London, E.C.

**Teds (105/2).—BLACKBEETLES AND COCKROACHES** are not killed by insect-powder, but if it is sprinkled near their holes and over the floors the last thing at night, it intoxicates them, and they can be swept up in the morning. Most of the poisons for these pests contain red-lead, such as: (1) Red-lead 3*j.*, oatmeal 3*vj.*; (2) borax 3*vj.*, red-lead 3*j.*, sugar 3*vij.*, cocoa-powder 3*j.*. The following is also good: (3) Precipitated carbonate of barium 3*j.*, borax 3*vj.*, oatmeal 3*vij.*. Mr. Pilkington Sargeant has found ferric arsenate useful for the purpose.

**F. & C. (142/38).—YEAST TESTING.**—The simplest method is to mix a definite quantity of yeast with a saccharine solution maintained at a uniform temperature, and note the quantity of gas evolved and the rate of evolution. In experiments on this method which were published some years ago 0.5 gram of the strongest yeast yielded 86.2 c.c. of carbonic acid in two and a half hours. (2) The standard WORKS ON FERMENTATION are Hansen's "Practical Studies in Fermentation," 12s. 6d. (Spon), and Jorgensen's "Micro-organisms and Fermentation," 10s. (Macmillan), but neither book can be classed as simple.

**L. O. & S. (77/66).—NON-GREASY HAIR-WASH.**—The following gives a stimulating lotion for the hair:

Spt. ammon. arom. ... ... ... 5 <i>j.</i>
Glycerini ... ... ... 3 <i>j.</i>
Tr. cantharidis ... ... ... 3 <i>ss.</i>
Ext. jaborandi liq. ... ... ... 3 <i>j.</i>
Aq. rosmarini ad ... ... ... 3 <i>xx.</i>

**E. M. F. (140/34).—BUYING A BUSINESS.**—There was an article on this subject by "Jay Mack" in the *C. & D.*, January 25, 1908, p. 151, which you should read. The matter is dealt with in a general way in "How to Buy a Business," by A. W. Bromley, 2s. 6d. (Unwin). Mr. Bromley is a chemist.

**J. B. (169/20).—LIQUID GLUE.**—A recipe was given in the *C. & D.*, February 27, 1909, p. 354.

**S. T. P. (120/42).—SULPHITE PITCH.**—Since we replied to you (*C. & D.*, August 21, p. 358) we have been informed that sulphite pitch is a by-product in paper-making. It is obtained from the lye which remains with the resinous compounds after treatment with sulphite. Sulphite pitch is employed as an agglutinant in making briquettes.

**T. H. O. J. (105/45).—LACQUERING.**—This process, as applied to brass gas-brackets, etc., consists in first cleaning the brass from every trace of grease and then applying lacquer to the hot metal. A good deal depends upon the freedom from grease of the brass, and to ensure this brasswork is boiled in strong solution of pearlash, followed by a bath of nitric acid (1 of acid to 3 of water). After being in the acid bath for an hour or so, the brass is washed and scoured with sand until every part is clean. This is followed by another acid bath of nitric acid 1 part, sulphuric acid 2 parts, water 1 part, into which the brass is dipped, rinsed with water, and dried with sawdust. When dry the brass is rubbed with soft rags and chamois leather and heated. When just too hot to hold lacquer is applied. The brush should be of soft flat camel-hair, trimmed to a straight edge. The lacquer is put into a cup with a wire stretched across, against which the brush is squeezed to rid it of superfluous lacquer. There are many formulæ for lacquers, the essential constituent being shellac in alcohol in the proportion of about 3 oz. to the pint, various colouring-ingredients being added. The following from "Pharmaceutical Formulas" is representative:

Shellac ... ... ... ... 3 oz.
Turmeric ... ... ... ... 1 oz.
Annatto ... ... ... ... 2 dr.
Saffron ... ... ... ... 2 dr.
Spirit ... ... ... ... 16 oz.

Make a tincture of the drugs, filter, and in the filtrate dissolve the shellac. Again filter or strain.

**Billy (142/39).—**—There is no book published especially for those opening shop as registered druggists.

**H. J. N. K. (139/38).—BRANCH POST-OFFICE.**—The first step to obtaining a branch post-office is to write to the Secretary of the General Post Office at St. Martin's-le-Grand, giving particulars of the district in which your shop is situated, mentioning the nearest post-offices, and backing up your statement with a petition signed by the inhabitants of the district asking that a branch office be established. The experiences of several chemist-postmasters were given in the *C. & D.*, January 24, 1903, p. 129; January 31, 1903, p. 211; and February 79, 1903, p. 249.

**Africanus (Pretoria) (137/5).**—We have not space to give you the forty recipes you name. Some of them, such as spirit of hartshorn, polychrest, rhubarb-powder, and balsam of sulphur, are not peculiar to Boer medicine.

**Pons (138/32).**—We are not acquainted with the cuticle-solvent.

**W. B. (141/67).—(1) ESSENCE OF PINEAPPLE:**

Butyric ether ... ... ... 5 oz.
Acetic ether ... ... ... ½ oz.
Oil of orange ... ... ... 1 dr.
Essence of pear ... ... ... 2 dr.
Rectified spirit ... ... ... 6 oz.
Distilled water ... ... ... 1½ oz.

Mix.

(2) ESSENCE OF JARGONELLE PEAR:

Acetic ether ... ... ... 1 oz.
Amyl acetic ether ... ... ... 3 dr.
Glycerin ... ... ... ½ oz.
Rectified spirit ... ... ... 20 oz.

Mix.

**S. P. (140/59).—ESSENCE OF RASPBERRY.**—A good recipe for this was given in the *C. & D.*, January 26, 1907, p. 160.

**J. W. C.** (Brisbane) (119/32).—MANUFACTURE OF ALCOHOL.—Recently published books are Brant's "Practical Treatise on Distillation and Rectification of Alcohol," 21s. (Low); McIntosh's "Industrial Alcohol," 7s. 6d. (Scott, Greenwood); Wright's "Practical Handbook on the Distillation of Alcohol from Farm Products," 4s. 6d. (Spon). The subject is also dealt with in Thorpe's "Dictionary of Applied Chemistry."

**Doctor** (133/18).—BOOKS ON DISTILLING.—See reply to "J. W. C." The various articles on spirits in Thorpe's "Dictionary of Applied Chemistry" would be particularly serviceable to your customer in acquiring the information on distilling.

**Nostrums** (138/32).—PILLS FOR CHRONIC RHEUMATISM.—The control of the urgent symptoms in chronic rheumatism is best obtained by administering salicylates. Sodium salicylate in 5-grain pills would therefore be the best general pill for this trouble. The chief treatment in chronic rheumatism is directed to improving the general health by administering iron, cod-liver oil, and arsenic, while potassium iodide and sulphur often prove useful. The local treatment consists of massage, warm bathing, and the application of stimulating liniments.

**Cymro** (121/63).—SHEEP'S COATS are tinted by the use of yellow ochre and burnt umber, in suitable proportions for the shade required. Pieric acid is also used in solution, but it is difficult to obtain the right colour. If the tint obtained is too dark, it is stated that it can be easily removed by solution of borax.

**S. A. Colonial** (O.R.C.) (126/16).—SHEEP-DISEASE.—The complaint you mention is somewhat obscure to veterinary experts in this country. It would be best to communicate with your State Department of Agriculture, whose officials probably have special information on the matter.

**E. D.** (135/66).—FOOD-PRESERVATIVE to suit your label.—Equal parts of boric acid and borax would be the most suitable powder form of food-preservative to accord with the directions on your label. It is not illegal, as you state, to employ boric acid for preserving food. The Departmental Committee on Preservatives in Food recommended the prohibition of the addition of any preservative to milk, but suggested that the use of boron preservatives might be permitted in cream to an amount not exceeding 0.25 per cent. and butter not exceeding 0.5 per cent. This again refers to the sale of food containing the preservative.

**C. K. B.** (120/64).—DRY SHAMPOO.—For formula see *C. & D.*, August 8, 1908, p. 250, or "Pharmaceutical Formulas." It is necessary to obtain permission to employ industrial or methylated spirit in such preparations.

**B. & D.** (136/41).—It is necessary to obtain permission from the Board of Inland Revenue before industrial alcohol can be employed in a hair wash. Samples of the hair-wash and the formula must be submitted at the time application is made.

**W. T. F.** (136/19).—You appear not to appreciate the point of the reply—viz., that you will find the formula in the number indicated, and this you can buy for sixpence.

**Sackville** (137/34).—FELON is a term applied to the inflammatory condition of the skin of animals known as hide-bound. Stimulating drenches containing ammonium carbonate, are given after the bowels have been relieved, while locally a lotion of sugar of lead  $\frac{1}{2}$  oz., fullers' earth 2 oz., water 2 pints is applied by means of a sponge.

**Rainwater** (105/38).—PURIFYING RAINWATER.—The soot is made to deposit by adding chalk, and when the chalk settles to the bottom it takes the soot down with it.

**W. F.** (78/15).—COLOURING LIQUID PARAFFIN.—The following are the colouring-matters soluble in oils and fats: *Red*, alkanet; *green*, chlorophyll; *yellow*, ethereal annatto extract, turmeric, carthamin; *brown*, alkanet and chlorophyll. There are also several oil-soluble aniline dyes, "butter yellow" dissolved in olive oil being employed as a tint in butter-making.

**Rumatol** (80/71).—TRANSFERRING DESIGNS to silks and satins. The usual method seems to be to perforate the design by running a pointed wheel over the lines and then to dust on to the perforations a mixture of powdered resin and lamp-black. After dusting off excess of powder a hot iron is run over the pattern, which has the effect of melting the resin and so fixing the design.

**G. C.** (Geneva) (142/14).—NAIL-POLISH.—These depend upon the presence of either putty-powder or oleate of tin. Any of the powders given in "Pharmaceutical Formulas" can be converted into pastes or creams by the use of diluted glycerin.

**Jean** (138/65).—GREASE-PURIFICATION.—The process to which waste grease is submitted for purification is as follows:

The grease is placed in tanks of 100 gals. capacity with 5 gals. of water to which 2 per cent. of sulphuric acid has been added. The whole is then boiled by means of a perforated steam-coil laid in the tank. As soon as the mass begins to boil the admission of steam is so regulated that the temperature remains at between 80° and 90° C. After two hours' treatment the steam is shut off and the tank covered and left until the following morning. The grease is removed from the water and washed with clean water, the fat being again melted by steam-heat. The final process consists in mixing the grease with potassium permanganate and sulphuric acid, the proportion being 1 kilo. of potassium permanganate and 300 grams of sulphuric acid for each 100 kilos. of grease. Live steam is admitted and the whole mass energetically stirred. Next morning the odourless and colourless grease is separated from the acid solution and washed.

**Booco** (140/44).—LIVER-SALT is a term applicable to salines containing sodium sulphate which has a specific action in promoting activity of the liver. A suitable formula is that given in the *C. & D.*, December 26, 1908, p. 983, and others will be found in "Pharmaceutical Formulas."

## Trade-marks Applied For.

Objections to the registration of any of the undermentioned applications should be lodged with Mr. Temple Franks, Comptroller-General of Patents, Designs, and Trade-marks, at the Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form No. 7, cost £1, obtainable through any money-order office. The figures in parentheses refer to the classes applied for.

- (From the "Trade-marks Journal," August 25, 1909.)
- "TEOGOLD"; for a gold paint (1). By N. Mayer & Co., 6 Trinity Square, London, E.C. 313,697.
  - "RYLAMBER"; for lacquer, varnish, etc. (1). By Llewellyn Ryland, Ltd., 24 Haden Street, Birmingham. 314,676.
  - "VIGORO"; for veterinary preparations (2). By L. K. Osmond, Albion Street, Spalding. 311,718.
  - "AQUASOL"; for a disinfecting-liquid (2) and for a bleaching-liquid (47). By Yorkshire Dyeware and Chemical Co., 14 Park Square, Leeds. 312,715/6.
  - "G II C," and picture of chemist, corn-plant, and farmer; for all goods (2). By G. Hadfield & Co., Ltd., 18-28 Lightbody Street, Liverpool. 314,429.
  - "WAMI"; for an eczema cure for dogs (2). By R. H. Wilson, The Old Croft, Holmwood, Surrey. 314,273.
  - "PEARL DUST"; for all goods (2). By United Alkali Co., 30 James Street, Liverpool. 314,736.
  - "PACOFIUID"; for chemicals (2). By Pearson's Antiseptic Co., Ltd., 15 Elm Street, London, W.C. 314,867.
  - "ZAKKO PASTILS"; for medicated pastilles (3). By G. Ratcliffe, 23 Dewsbury Road, Leeds. 314,230.
  - Fac-simile signature; for all goods (3). By Joseph Soar, Castle Street, Hill Top, Eastwood. 314,027.
  - "LA TONIQUE," and label device; for medicated wine (3). By J. Hawker & Co., 129 Exeter Street, Plymouth. 314,263.
  - "THALETTS"; for medicinal chemicals (3). By H. K. Mulford Co., 412-426 South Thirteenth Street, Philadelphia. 314,446.
  - "HEMOLEM": for proprietary medicine (3). By M. A. Pitman & Co., 20 Mount Street, Manchester. 314,904.
  - "VANGUARD"; for goods (4), spraying-machines (7), and aerated waters (44). By A. J. Murphy, 19 Dorrington Street, Leeds. 313,844, 314,226, 313,847.
  - "NEBULIQUE"; for an atomiser (11). By C. J. Hewlett & Son, Ltd., 35-42 Charlotte Street, London, E.C. 313,564.
  - Label device, "WITCHELL'S FOOD"; for a food (42). By R. A. Witchell, 26 Grove Street, Derby. 314,023.
  - "LAIBOSE"; for food-substances (42). By Fairchild Bros. & Foster, Fairchild Building, Washington and Laight Streets, New York, U.S.A. 314,071.
  - "RED BALL BRAND"; for essences, essential oils, etc. (42). By Stevenson & Howell, Ltd., 95 Southwark Street, London, S.E. 314,496.
  - "ELYSIUM"; for all goods (44). By A. J. Butteau, 28 Batemans Street, Cambridge. 314,207.
  - "EGLOSSA"; for hair-wash (48). By W. H. Hawker, 129 Gloucester Road, Bishopston, Bristol. 314,559.
  - "STOTTO"; for perfumery, etc. (48). By H. Tattersall, 36 Barlow Moor Road, Didsbury. 314,551.

# What the Profession Thinks of Odol.

The following are extracts from a few of the letters that are continually being received from Members of the Medical and Dental Professions. The names are, of course, omitted in compliance with the rules of professional etiquette.

## LONDON, S.E.

"Odol is a most agreeable and satisfactory preparation for the teeth and gums, and I shall continue to use it myself, and recommend it to my patients." **M.D.**

## LONDON.

"I always prescribe your excellent mouth-wash and I find all my patients speak most highly of it." **L.D.S.R.C.S. Eng., Dental Surgeon.**

## LONDON, N.W.

"I find my patients are delighted with Odol after my having recommended its use to them." **L.D.S.R.C.S.**

## LONDON.

"I always use Odol now while sealing and cleaning teeth and patients all speak of its refreshing qualities, and I believe its continual application would certainly tend to arrest decay." **L.D.S. Eng.R.C.S.**

## DUBLIN.

"I consider Odol a perfect mouth-wash and recommend it to all my patients, especially after operations on the mouth. I will continue to do so as long as I find such good results." **L.D.S.R.C.S.I.**

## DERBY.

"I find Odol an admirable antiseptic in dental surgery, and shall continue using it. Many of my patients at my recommendation are using it daily." **DENTAL SURGEON.**

## CARLISLE.

"I use Odol myself, and advocate its use amongst my patients, with great comfort to us all." **M.R.C.S. Eng., L.R.C.P. Lond.**

## WESTON-SUPER-MARE.

"Odol forms a very refreshing dentifrice, and from the nature of its constituents should be of a high antiseptic value." **M.D.**

## SOUTH DEVON.

"I find it the most pleasant and efficacious mouth-wash, and all my patients are delighted with it." **L.D.S.R.C.S.**

A retired Senior Surgeon at one of the great London Hospitals thus concludes a long communication on the subject of Odol :—

**"To sum up the virtues of Odol as a mouth-wash and dentifrice: it is a very powerful germicide and deodorant, and the effect is lasting, which is a point of great importance in reference to the purity of the breath. Moreover, it is non-poisonous, unirritating, and absolutely innocuous, neutral in reaction and agreeable in flavour. No deleterious, or potentially deleterious, substance in the mouth-cavity can possibly escape its effects."**

**These are the qualities we should expect to find in a perfectly ideal mouth-wash, and their combination must be extremely rare."**

## EDINBURGH:

"I have been using Odol in the surgery, and my patients appreciate it. I consider it a very agreeable as well as a useful preparation." **L.D.S.R.C.S.**

## GLASGOW.

"I personally use Odol as well as recommend it to my patients." **L.R.C.P., L.R.C.S.**

## NEWCASTLE-ON-TYNE.

"I have used Odol in my surgeries, and my patients have expressed their appreciation of your preparation. Personally I think it an excellent dentifrice." **L.D.S.R.C.S.**

## KING'S LYNN.

"Odol is a very refreshing preparation, and very useful for the operator, especially where a general sealing has to be done, as it keeps the patient's breath sweet during the operation, and this is very beneficial to the dentist." **L.D.S.R.C.S.**

## BRISTOL.

"I have personally used Odol since its introduction, and it is the best I know for children. I frequently recommend it as a gargle and a mouth-wash." **M.R.C.S. Eng.**

## BRADFORD.

"Patients appreciate Odol, especially after taking impressions of the mouth." **L.D.S.R.C.S.**

## BEDFORDSHIRE.

"I have given Odol a thorough trial, and find it very satisfactory. It leaves a delightful sense of purity in the mouth, and must have a beneficial action on the general health." **L.R.C.P.**

## STRATFORD-ON-AVON.

"I have used Odol and like it very much; so do my patients." **L.D.S.F.P.S.**

## BEDFORD.

"The result of my experience of Odol is that I am recommending it to patients as the only dentifrice which remains on the teeth after use—an invaluable quality." **L.D.S.R.C.S. Eng.**

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PIETERMARITZBURG  
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Travellers constantly visit smaller towns and country districts of **Cape Colony, Natal, Transvaal, and Orange River Colony.**

Firms desirous of pushing South African trade should consult us.

## UNGUEMOL

(REGISTERED)

A fatty Ointment-basis, miscible with water in all proportions.

The introduction of Unguemol marks a new era in galenic pharmacy. It is a translucent, bland fat, which is readily absorbed, and which on removal leaves the skin smooth and supple.

The ease with which Unguemol combines with water is demonstrated by applying a little to the back of the hand, adding simultaneously water, drop by drop. A cream will gradually form, and this may be entirely rubbed in, or completely washed off with more water.

The unusual property of forming a *natural* emulsion with water or dilute alcoholic liquids pre-eminently adapts Unguemol for general use. No other fat possesses this unique property of combining directly with water. It enables quite a small amount of ointment or liniment to be applied over a large area, while should excess be used and soak into the under-clothing, it may be easily washed out again.

For the preparation of creams in which advantage is taken of the cooling effect due to evaporation, Unguemol is unrivalled. Water or spirituous liquids may be incorporated to any extent; in fact, if the liquid is added by degrees, Unguemol may be diluted to the consistence of a thin milk.

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**THOS. TOMLINSON & SON,****Chemists' Valuers and Expert Stocktakers,****Businesses transferred privately.****29 - NEW CANNON STREET, MANCHESTER.****BUSINESSES FOR DISPOSAL.****3s. 6d. for 50 words or less; 6d. for every 10 words beyond, prepaid.****NOTE.—Replies can be addressed to this Office and forwarded to the Advertiser for an additional charge of 6d.****COLONIAL BUSINESSES.**

We call the special attention of our Colonial subscribers to the opportunity this Supplement affords when they wish to dispose of their Businesses, of getting into touch with likely buyers either at home or in the Colonies.

**Replies to Advertisements may be addressed to this Office and forwarded to the Advertiser for an additional charge of 6d. Trade circulars and samples can in no case be forwarded.**

**WILL** the advertiser 175/33 in this issue kindly send us his name and address.

**B**RISTOL (near).—Snug little Business, working class, with Extractions; suit qualified or unqualified; comfortable house; good stock and fittings; increasing turnover; rent £26, inclusive; main road; double-fronted; bargain for immediate sale, £100 cash, or part may remain on good security; no agents. Apply, "Prescription" (173/2), Office of this Paper.

**B**UCKS.—Sound and reliable country Retail, Dispensing, and Prescribing Business, returning £990 at very good prices; well-fitted shop, fully stocked; comfortable house, with large garden; most pleasant healthy locality and within easy distance of London; stock and fixtures worth £350 to £400; lowest cash price £400; worth more. "Nemo" (177/100), Office of this Paper.

**D**EVENSHIRE.—In a rapidly growing residential suburb of large town; good-class Retail and Dispensing Business; modern shop, well fitted and stocked; convenient dwelling-house with garden, front and back entrance; rental of shop and house £32 per annum; sale price of premises (freehold), £650; stock (small) at valuation; an exceptional opportunity for an energetic young man of working up a thoroughly sound and profitable business. Apply, 134/31, Office of this Paper.

**D**EVENSHIRE (Market Town).—Good-class Family, Retail, Dispensing, and Prescribing Business, returning close upon £1,000 yearly; net profit nearly £350; best position in town; good house and garden at low rent; on lease; price £800 or offer, or valuation of stock and fixtures; £500 cash, balance by instalments; no good-will asked, as early sale desired; genuine reasons for leaving. "D. V." (177/10), Office of this Paper.

**K**ENT (East Coast).—Old-established Business; Light Retail, Dispensing, Photographic, and Optical; good position; long lease at low rental; good Proprietaries; bracing climate; returns about £800; well stocked; reasonable price accepted. "A. B. C." (174/11), Office of this Paper.

**L**ANCASHIRE.—General Retail, Photographic, and Optical Business; splendid position; main thoroughfare, busy manufacturing town; has been run entirely under management; plenty of scope for energetic man; well-fitted Pharmacy; profitable Specialities and Optical Department; liberal discount off valuation to effect quick cash sale. 175/53, Office of this Paper.

**L**EEDS (1½ miles from centre of City).—Exceptionally good position on a main road; good working-class district; splendid opening for a good Prescribing Chemist, Extractions, Photography, etc.; good house; rent £40; good reason for selling; about £150 cash. Apply, Williams (174/39), Office of this Paper.

**L**INCOLNSHIRE.—Mixed Retail Business, with a little Wholesale, in large market town; returns £800; good position; low rent; 7 years' lease; price £250, or valuation of stock and fixtures. Further particulars from "Thorom" (175/8), Office of this Paper.

**L**ONDON, N.W.—Old-established Business; Light Retail, Dispensing, and Photographic; good position; returns over £800; very low price to cash purchaser; owner taking over country business. Apply, 173/23, Office of this Paper.

**L**ONDON, W.—Light Retail and Prescribing; returns £400; scope for increase; low rent; price £160, or near offer; or manager with view to succession treated with. Apply, 176/20, Office of this Paper.

**L**ONDON, N.—Excellent opportunity to acquire a sound Cash Retail Business with turnover £950; net profits unusually good; splendid position; thickly populated locality; price about £600. bona fide purchasers write for further particulars, "Acacia," c/o Willows & Co., Ltd., 40 Aldersgate Street, E.C.

**L**ONDON (in good-class district).—Retail and Dispensing Business, returning over £1,100; net profit £320; well stocked and fitted; price £850. Full particulars on application to 177/2, Office of this Paper.

**M**ID-CHESTER.—Attractive Central Pharmacy for immediate Disposal; lock-up shop, handsomely fitted, with post-office attached; returns £425, with steady increase; post-office returns £70 a year clear profit; satisfactory reasons for disposal; rent £35; vendor can arrange any terms of tenancy lease. Apply, "P. O." (175/9), Office of this Paper.

**N**ORTH OF ENGLAND.—Nice Light Retail, Dispensing Business for Sale; good class; few Patents; good prices; owner going into medical; present returns about £700, increasing; no opposition; price for quick sale £400. Apply, "Oleum" (174/29), Office of this Paper.

**N**ORTH STAFFORDSHIRE.—Unopposed, good Mixed Village Business; same family 60 years, now retiring; profits £300; scope for increase; good house; large premises, garden; rent £19; price £400 to an immediate purchaser; a rare chance. Apply, "Y. T.," c/o Wyleys & Co., Coventry.

**N**ORTH WALES.—First-class, old-established Dispensing and Optical Business, in beautiful locality and health resort, for immediate Disposal; excellent prices in Dispensing and Retail; valuable Proprietaries; very little opposition; rapidly increasing neighbourhood; fine premises at low rent; reasonable price; owner leaving country. Apply, "Lewis" (170/22), Office of this Paper.

**P**RESTON.—Attractive and well-fitted Shop, with good Chemist's and Druggist's Business, taking £10; increased £6 per week past year, and rapidly growing; rent only £20; price all, £325. Apply, Utton Bros., 6 Cannon Street, Preston, and refer 1576. Tels., Uttons, Preston. Nat. Tel., 408.

**S**TAFFORDSHIRE.—Well-fitted shop in best position, main street, manufacturing town; good working stock in excellent order; to be sold as a going concern at a reasonable price to a cash buyer; a chance seldom offered, as stock can be reduced to meet customer's wishes to a very low figure. "Solicitor" (177/12), Office of this Paper.

**S. W.** Suburb.—Main line of trams pass door; compact Business, doing £600 yearly; nearly all Drugs; stock and fixtures will be sold for the low sum of £150. Rent of shop and comfortable house to 174/7, Office of this Paper.

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**ULVERSTON.**—For immediate Sale, on account of ill-health, a very good old-established Retail Chemist's Business; Dispensing, Photographic, Wines, and Specialties; well-stocked shop, with prominent corner position in busy market town; turnover £4,500; been established over 50 years in same premises; exceptionally good connection; rare opportunity to acquire a fine old business; fullest investigation to bona fide inquirers. For further particulars apply to F. J. Harrison, A.A.I., Valuer, Accountant, etc., Ulverston.

**BRANCH** Business for Disposal, increasing yearly, in growing neighbourhood of large Midland town; returns (1908) over £500, increasing; low rent; large house and garden; all books can be seen. 171/26, Office of this Paper.

**CHEMIST'S** Business (London) for quick Sale; owner, who is giving up for satisfactory reasons, will sell as a bargain to non-literate customer; shop single-fronted, well fitted throughout; lions attached; takings, books shown; capital chance for a smart man. Particulars, apply, Henry Bramall, Incorporated Accountant, 12 St. James Street, Sheffield.

**RUG-STORES**, suitable for qualified or unqualified man; thickly populated working district, North Stafford; rent 4s. 6d. per week, taking about £200; for a quick sale £80 will be accepted. 167/2, Office of this Paper.

**EXECUTOR'S** Sale. Old-established South Coast Chemist's, with dental connection; a bargain for quick sale; rent £36; excellent premises; growing neighbourhood; late owner of great age; small scope; price for lease, modern fixtures, and Dental appliances only £150; stock valuation about £150; every investigation out. T. Robson, Valuer, Portsmouth.

**FOR** immediate Disposal, high-class Retail Business; good residential suburb in West Riding Yorkshire; rapidly increasing; no competition; about £750. Apply, 174/6, Office of this Paper.

**FOR** immediate Disposal, through ill-health, unopposed Cash Business near London; nicely fitted double-fronted shop; returns average £1,60; price for fittings, fixtures, and goodwill, £80; stock valuation, 177/19, Office of this Paper.

**FOR** immediate Disposal, an old-established Chemist's Business, near King's Cross Station; weekly takings average £6 to £7, full prices; smart man could do double; rent £55, on lease; could let off £50, all at £50, or nearer offer; not the price of stock and fittings; death cause of sale. Sanson, 49 Meeson Road, West Ham.

**OLD-ESTABLISHED** Country Retail Business for Sale in Mid-lands; average returns £675; rent £55; good business premises; large house; Cash trade; plenty of Prescribing; growing village; opening for Dentistry and Optics; £200 (all at). Apply, "Pharmacist" (173/13), Office of this Paper.

**ONE** of the finest Businesses in important Yorkshire town; present owner over 40 years, retiring; very high-class and important side-line; genuine purchasers only with capital £1,200 to £1,700 entertained. "X. Y. Z." c/o Hearon, Squire & Francis, Ltd., 78 Southwark Street, S.E.

**STOUND** Country Business; making a good living; convenient hours; expenses and rent very low; business easily worked; price £180; this is an exceptional offer to facilitate a quick sale; suitable for unqualified man; only those with necessary cash need apply. "Profitable" (173/21), Office of this Paper.

**SURE** living; qualification not absolutely essential; South Devon; seaside; old-established Business; profits to £4 weekly; ample scope; large house, handsomely fitted; dense population; owner under doctor's orders to leave; £220 cash (2 years' instalments slight increase) or valuation; honest bargain; questions freely answered. "Chemist," c/o Horsley & Weightman, Guildhall Chambers, London.

**YOUNG** Chemist, holding a good appointment, has a well fitted and stocked Shop on main thoroughfare of W. London suburb which he is unable to look after, and would dispose of same on very easy terms; rent £45; good house and garden; no opposition; net profit last year £180. "Chemist," 6 Station Road, New Barnet.

£50 down and balance by arrangement; valuation for fittings and stock; Mixed Retail and Family Business; low rent, on lease; good house; returns over £700 last year under unqualified man; investigation courted; full particulars to bona fide buyer; no agents; first time advertised. Address, "Yorkshire Town," c/o Raime & Co., Druggists, York.

£65 (all at) for Quick Sale.—Small Business in dense, poor neighbourhood near City; no close competition; could do £5 to £7, at good profits; inclusive rent 15s. 6d. weekly, with six living-rooms and basement. Apply, 177/9, Office of this Paper.

£100.—Unopposed small Country Business; Drugs, Stationery, Optics; Extractor could make money; suit unqualified or qualified; county, Essex; good house; rent £25. Write for particulars. 173/3, Office of this Paper.

## BUSINESSES WANTED.

**A DVERTISER** desires a small neglected Business; must be with scope; only a cheap one entertained; will take possession at once; Birmingham district; or information for an opening, £2 given if acted upon; no agents. "Rhei" (175/28), Office of this Paper.

**WANTED**, a good sound Retail Business in nice locality, inland health resort or watering-place preferred, showing annual returns about £1,200 to £1,500; must bear strict investigation; immediate payment for genuine concern. 175/31, Office of this Paper.

**WANTED**, to purchase a small Business; price moderate; London or any reasonable distance. 177/11, Office of this Paper.

## FOR SALE.

**FOR** Sale, Shop Fixtures, good solid mahogany, fair condition, comprising counter-wall shelves, several showcases, screen, etc. Particulars from Coley, Cnmscross, Stroud.

**FOR** Sale, the whole of the Fixtures and Trade Utensils, comprising wall-fixtures, counters, wall-cases, counter-eases, dispensing-scales, window-fittings, shop-rounds and jars, etc. Apply, 21 Market Place, Middleton, Lancs.

## TO LET.

**BACONSFIELD.**—Shop suitable for a Chemist; outside station 5 bed, bath, 2 reception, kitchen, large shop, etc.; rent £60. Frost, Auctioneer, Beaconsfield.

**CRICKLEWOOD BROADWAY** (adjoining Tram and Bus Terminus).—To Chemists and Druggists.—To be Let, commanding Shop Premises, with house over, in this important thoroughfare; magnificent opening here for this trade; rent £125 per annum; shop-front, fittings, and advantageous terms arranged for responsible tenant. Apply, at once, to A. Bretzfelder, Builder, 180 Cricklewood Broadway, N.W.

**FREE** Shops to Let to Quarter Day; good shops; fortune to Chemists; unopposed spots, Westcliff and Southend; rents £28 to £90. R. Shorefield, 2 Station Road, Westcliff-on-Sea.

**SHOP** to Let; exceptionally good opening for a Chemist and Druggist; no other Chemist's shop in the road or near; situated 82 Moyser Road, Streatham. Apply, H. Thorp, 42 Pretoria Road, Streatham.

## PREMISES FOR SALE.

**TO** Chemists (Manufacturing), Etc.—Deptford.—Splendid Business Premises to be Sold, with vacant possession; the valuable leasehold premises, No. 53 Broadway, Deptford, occupying the finest position in the locality, containing basement, lofty shop and upper floors, and capable of sub-division; price £3,500; £350 cash only required, balance by monthly payments, including interest spread over 20 years if desired; and making a total payment much under rental value; lease 44 years unexpired, at a ground rent of £120 per annum; caretaker on premises. For further particulars apply, H. Johnstone, 25 Moorgate Street, E.C.

## AGENCIES.

**SOUTH AFRICA.**—A gentleman, leaving shortly for South Africa as Representative for one or two firms, is anxious to obtain one other, not clashing with those already secured; has had 12 years' experience in the Drug trade, and knows intimately the leading buyers in British South Africa. Apply, "S. A." c/o Shirley Bros., Ltd., Whitecross Works, Loudon, S.E.

**CHEMISTS.**—One Chemist in each district throughout United Kingdom wanted to be Sole Agent for important advertising Novelty, in connection with their own business, to be distributed free among customers. Write on trade heading in first instance to Mr. W. Barrett, 56 Norbury Crescent, Norbury, London, S.W.

## PARTNERSHIPS.

**SMART** young business man required, qualified preferred, to join a small private Limited Company doing a fairly profitable Wholesale and Retail business; one capable of taking the inside management preferred. Apply, giving full particulars and amount of capital at command (in confidence), to 172/112, Office of this Paper.

# SITUATIONS OPEN.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond, prepaid.



This Blackboard demonstrates that Advertisers using these columns get a ready response to their announcements. The figures only refer to some of the letters RECEIVED AT OUR OFFICE on behalf of advertisers who use a number or nom de plume.

## RETAIL.

### ANSWER IN TERMS OF THE ADVERTISEMENT AND

REMEMBER you are one of possibly hundreds applying for the same position. Put your case before the advertiser so that he may be able to form a MENTAL PICTURE of your suitableness.

**BE BRIEF BUT CLEAR**—millions of applications are consigned to the waste-paper basket UNCONSIDERED, because the reader cannot form this picture from the inadequacy of the materials set before him.

### TO SAVE TROUBLE.

MANY correspondents answering advertisements in this Supplement enclose remittances to cover the cost of forwarding their letters to advertisers who prefer to be addressed c/o this Office. The Publisher desires to make it clear that the *Advertiser* pays postal charges in such cases, and perhaps this reminder will obviate the necessity of the constant return of remittances which forgetfulness of this fact entails.

REPLIES TO ADVERTISEMENTS may be addressed to this Office and forwarded to the Advertiser for an additional charge of 6d. Trade circulars and samples can in no case be forwarded.

**A**BERDEEN.—Qualified Assistant required; young man, smart at Counter and with good Dispensing experience. Apply, with full particulars of experience, stating age, height, salary required, and when disengaged. Hunter, Chemist, 11 Union Street.

**B**EDFORD.—Wanted, a qualified male Dispenser as temporary Dispenser in Doctor's Surgery; non-resident; hours 9.15 A.M. to 1 P.M., 2.4 P.M., 6-8 P.M. Give references, age, and previous experience, Drs. Nash and Birks, Bedford.

**B**IRMINGHAM.—Assistant wanted; married; good salary to reliable man; house free. State full particulars, with photo, to 173/10, Office of this Paper.

**B**IRMINGHAM AND MIDLAND EYE HOSPITAL.—Wanted, a male Assistant Dispenser, to attend at the above Hospital every day from 9 till 1 o'clock; salary £40 per annum. Applications, stating age and qualifications, to be sent to the undersigned on or before Thursday, September 9. By order, Charles A. Mason, Secretary. Church Street, Birmingham. August 23, 1909.

**B**OMBAY.—Assistant (just through his exam. preferred) for an English firm of Chemists; two other qualified Assistants kept; passage P. & O. paid out and home; 3 years' agreement; salary first year £175, second £200, third £215. Apply, with photo and copy testimonials, to "Bombay," c/o S. Maw, Son & Sons, 7 to 12 Aldersgate Street, E.C.

**B**OMBAY.—An Assistant wanted, possessing the Minor qualification between 25 and 30 years of age; good salary; preference given to applicants having a knowledge of Surgical Instruments and Scientific apparatus; 4 years' agreement would have to be signed. Apply, with photo and full particulars, to "Assistant," c/o Messrs. Evans Sons Lescher & Webb, Ltd., 60 Bartholomew Close, London, E.C.

**B**OSSCOMBE.—Assistant required for good-class Dispensing and Retail; preference given to young married man who could live over shop. Please state usual particulars and salary required to Hornby, Pharmacist, Boscombe, Bournemouth.

**B**RADFORD.—Wanted, immediately, an outdoor qualified Assistant about 23 years of age; reliable Dispenser, good Counter-man, and of gentlemanly appearance; part-time Dispensing for Hospital. State age, salary, and references, F. M. Rimmington & Son, Ltd., Chemists, Bradford.

**B**RIGHTON.—Locum wanted for a fortnight from first or second week in September. Apply, with terms and usual particulars, to Charles H. Evans, 129 London Road, Brighton.

**B**RIGHTON.—Qualified Assistant required about September 6; accustomed to high-class Retail and Dispensing; aged about 24. In reply state height, age, previous experience, salary required, and if possible enclose photo, to Franklin (late Savory & Moore), King's Road, Brighton.

**B**RIGHTON.—Junior, unqualified, for good middle-class business; experienced in Dispensing, knowledge of Photography; indoors; age about 24; no Store men. Forward full particulars, photo (if possible), to Savage, Pharmaceutical Chemists, Brighton.

**B**URSLEM.—Qualified Assistant required, about September 20, outdoors, with knowledge of Photography; weekly half-holiday. Applicants please state salary required, age, references, etc., to A. P. Tiley, Chemist, Burslem.

**B**URTON-ON-TRENT.—Assistant or Junior wanted, at once, in good-class Retail; outdoors; knowledge of Photographics; good Stockkeeper and Window-dresser; must be steady, reliable and good Counter-man, with experience of Store trade. Send full particulars, with photo (returnable), salary required, to Francis Hallam, Ltd., Burton-on-Trent.

**B**UXTON.—Competent Assistant; good-class Dispensing business. Give age, height, references, salary required (indoors), and photo to A. Thresh, Chemist, Buxton, Derbyshire.

**C**AMBRIDGE.—October 1; qualified Assistant, of gentlemanly appearance, for Dispensing business, with Light Retail and Photography. Please give age, height, references, and salary required (in or out doors) to J. H. Leech, The University Pharmacy, 36 Trinity Street, Cambridge.

**C**ARDIGAN.—Immediately, a male or female Assistant for 4 or 5 weeks; qualified preferred. State terms, Morgan, Pharmacist, Medical Hall, Cardigan.

**D**AVOS, Switzerland.—Assistant, speaking French and German, wanted. Apply, with references, to Weinreich & Lang.

**E**LTHAM.—Wanted, qualified Assistant for brisk suburban Dispensing business; abstainer preferred. Apply, Mellin & Co., Eltham.

## SITUATIONS OPEN (continued.)

**H**AMPSHIRE.—Assistant, in September, about 24; outdoors; qualification not necessary; good all-round man; thoroughly trustworthy; used to good Family and Prescribing business, with Photography (good Extractor preferred); no Sunday duty; half-holiday; permanency to suitable man. Apply, full particulars with photo, to "X. Y." (173, 6), Office of this Paper.

**H**ARROGATE.—Wanted, unqualified Assistant; accustomed to a high-class Dispensing business; indoors. Apply, stating age, height, references, and salary required, to A. B. Payton, Crown Pharmacy, Harrogate.

**H**ASTINGS.—Qualified Assistant wanted for Dispensing business; indoors. Please give usual particulars as to age, experience, salary required, and enclose photograph, Tharle, Pharmaceutical Chemist, Hastings.

**J**OHNNESBURG.—Assistant; age 21 to 24; qualified or otherwise; outdoors; no agreement; £20 per month first year, £22 10s. per month second year; good references required. Apply, by letter, "Transvaal," 153 Onslow Drive, Glasgow.

**L**EAMINGTON SPA.—Wanted, early in September, qualified Assistant (about 22 or 23) for high-class Dispensing business. Apply, with full particulars as to age, height, experience, salary required (indoors), and enclose photo (which will be returned), to Garrad, Leamington.

**L**IVERPOOL.—Outdoor Assistant for good-class Retail and Dispensing business. Apply, stating full particulars with photo (if convenient), to Ashcroft, Pharmacist and Optician, 112 Aigburth Road, Liverpool.

**L**ONDON, N.—Smart Junior, outdoors, with some London experience preferred; time for study if required. Apply, personally if possible, to Wootton, 33 Liverpool Road, N.

**L**ONDON, S.W.—Dispenser, Minor qualification, aged about 23, with good experience; outdoors, but to sleep on the premises. Apply, by letter, giving full particulars, to "Globenaris," c/o Messrs. Cooper, Son & Co., Ltd., 80 Gloucester Road, South Kensington S.W.

**L**ONDON, E.C.—Smart Junior required for City business; short hours; no Sunday duty; qualification not necessary. Apply, stating age, experience, and salary required (outdoors), to Manager, Lamplough's, 9A Old Broad Street, London, E.C.

**L**ONDON, E.—Qualified Manager for Brauch required; suit elderly, active man; outdoors; permanency. Apply per letter, with full particulars, to "T. J." (172/26), Office of this Paper.

**L**ONDON, S.W.—Assistant, with some experience in Dispensing, wanted by September 6; good-class modern Retail and Dispensing business; not under 21; comfortable berth. Write or call, Keith Longstaff, The Central Pharmacy, 811 Fulham Road, S.W. (a little beyond Walham Green).

**L**ONDON, N.—Junior wanted at once; part-time; outdoors; suit student; mornings free and one evening weekly; very little Sunday duty, or duty can be arranged. Personal application preferred, or send photo and full particulars in first letter to J. Wells Wood, Ltd., 92 Green Lanes, N.

**L**ONDON, N.—Energetic qualified Assistant, with good references, aged 25 to 30, to take charge of branch; Dispensing and Counter experience indispensable. Apply, with full particulars as to age, height, salary, and experience, to "N." 125 Hampstead Road (near Euston). Part-time Assistant also required.

**L**ONDON, S.E.—Required, at once, elderly Registered Chemist to take charge of Poisons and Dispensing Department for private Limited Company; light duty; terms must be strictly moderate and satisfactory references be forthcoming. 175/20, Office of this Paper.

**L**ONDON, W.—Qualified outdoor Assistant wanted for high-class business; must be good Counterman, Dispenser, energetic, and obliging, with some Store experience preferred; age about 40; state age, salary, experience, references. Also Part-time Assistant, qualified. "B." (176, 12), Office of this Paper.

**L**ONDON (City).—Young qualified Assistant wanted; good references. State full particulars and salary requested, 176/14, Office of this Paper.

**L**ONDON, S.W.—Wanted, by middle of September, unqualified Assistant for Light Retail; outdoors. State age, height, and salary required, F. R. Barlow, Pharmaceutical Chemist, Loughborough Junction, S.W.

**L**ONDON, W.—Wanted, a smart Branch Manager (qualified) by September 4; must be used to a quick Store business; Dispensing, Photographic, and Optics; good encouragement to suitable man. Apply, giving full particulars, to Bruce's, Ltd., 308 Earl's Court Road, S.W.

**L**OWESTOFT.—Wanted, an energetic Assistant; aged about 24; outdoors. State salary, experience, and references, James Fisher, Chemist, Lowestoft.

**L**YNDHURST (Hants).—Locum wanted from September 15 to 27; must be thoroughly competent and trustworthy. Full particulars, salary required, age, and references to W. A. Willis, Chemist, Lyndhurst, Hants.

**M**ALVERN.—Qualified Assistant for Dispensing and Retail. Please state full particulars of previous experience and salary required (indoors) to A. Mander, The Belle Vue Pharmacy.

**M**ANCHESTER.—Wanted, qualified Branch Manager for Mixed business. Please give usual particulars as to experience, age, height, references, and salary required; also send photo (which will be returned), to David Dickson, Pharmacist, Clayton, Manchester.

**M**ANCHESTER District.—Wanted, qualified Assistant for quick cash business; must be a worker, good salesman, steady, and trustworthy; no Sunday duty; half-day holiday weekly; good salary given to a suitable man; outdoors; permanency. Address, stating age, height, experience, reference, salary required, with photo, 172/37, Office of this Paper.

**M**ANCHESTER District.—Wanted, qualified lady Assistant for quick counter trade; half-day holiday weekly; no Sunday duty. Address, stating experience, age, and salary required, with photo, 172/37, Office of this Paper.

**N**EATH.—Experienced Assistant as second, where three are kept; must understand Photography; Welshman preferred; if married, arrangements might be made for living over the shop; hours exceptionally easy; no Sunday work. Apply, J. Griffith Isaac, Pharmacist, Neath.

**N**RTHAMPTON.—Wanted, qualified Assistant for Mixed business Photo, etc.; in or out doors. State salary required, when disengaged, etc., Lucas, Chemist, Northampton.

**O**XFORD.—Qualified Assistant for good-class Dispensing business; easy hours; outdoors; no Sunday or Bank Holiday duty. Also Junior Assistant. Apply, stating age, height, salary required, name references, and enclose photo, to Manager, Oxford Drug Co., Ltd., Oxford.

**R**EGENT'S PARK, N.W.—Part-time berth; suit Minor student; afternoons free. Give references and salary required, Bell, 96 Albany Street.

**R**UGBY.—By middle of September; smart, competent Junior for brisk business; Dispensing, Prescribing, Stock, Photographics, and Counter; excellent experience; outdoors; senior kept; easy hours. Give full particulars of experience, reference, and salary required, photo if possible, Fleet, Chemist, Rugby.

**R**OTHERHAM Hospital and Dispensary.—Wanted, a Dispenser; state particulars of qualifications and salary required. Apply to Secretary, G. W. Roberts, 8 Moorgate Street, Rotherham.

**S**CARBOROUGH.—Wanted, in September, qualified Assistant (about 22 or 23) for high-class Dispensing business. Apply, with full particulars as to age, height, experience, salary required (indoors), and enclose photo (which will be returned), to Clare & Hunt, Scarborough.

**S**OUTH AFRICA.—First-class qualified Assistants open to accept situations in the South African Colonies should apply to Lennon, Ltd., 54-58 Queen Elizabeth Street, London, S.E., who occasionally have vacancies on their books.

**S**OUTH OF ENGLAND.—Smart, gentlemanly Assistant required; aged 23 to 30; good salary and permanency for suitable man; must possess exemplary character for honesty, sobriety, and ability as a Salesman. Timothy White Co., Ltd., Portsmouth.

**S**WITZERLAND.—Wanted, an English qualified Assistant, with Continental experience and speaking French. Send particulars as to age, salary, and copy of references, together with photo, to the British and American Pharmacy, H. Masset, Lausanne.

**T**AUNTON.—Competent Junior, about 22; Counterman; neat, accurate worker. Full particulars of experience, salary required (indoors), photo, Mauder, Chemist-Optician, Taunton.

**T**UNBRIDGE WELLS.—Qualified Assistant (indoors) for high-class Dispensing business. State usual particulars and salary required to Howard & Son, Pharmacists, Tunbridge Wells.

**V**ENTNOR.—Junior Assistant; about September 11; qualified or not; age about 22; best-class Dispensing, Retail, and Photographic; knowledge of Developing and Printing essential; a young gentleman leaving apprenticeship entertained if good experience. Please state salary required (indoors) to Dunning, Ventnor.

**W**HITCHURCH.—Junior Assistant for Light Retail and Dispensing. Apply, with usual particulars, stating salary required (indoors), to Leonard Lee, M.P.S., Whitechurch, Salop.

**B**RANCH Manager, qualified, or with view to purchase; splendid opportunity for beginner; main road; established 25 years; capable of much increase under principal; low rent; stock and fixtures at valuation; part purchase could remain on if desired; Midlands: Johnson, 51 Park Street, Derby.

**D**ISPENSER required for firm of Doctors in Essex; capable, reliable; married man, who would have considerable liberty for daily exercise out of doors if his wife would take messages during his absence; salary about £70 per annum, rent, rates, and water free; live on the surgery premises; 4 rooms, with attic and bathroom, hot and cold water. Address, "C. P. W." c/o Burgoynes, Burbidges & Co., Coleman Street, E.C.

**E**LDERLY Assistant, qualified, wanted for a Light Retail and Dispensing business; easy hours; indoors; in the Midlands; gentlemanly appearance and manners most essential. Apply, "B.," c/o Messrs. Wyleys, Ltd., Chemists, Coventry.

**G**REEN & CO., Chemists, Swindon, require a Junior with knowledge of Photography.

**J**UNIOR; provincial town; accustomed to Light Retail and Dispensing. State experience, age, height, and salary required (indoors), 175/25, Office of this Paper.

**M**ANAGER, qualified, for Branch; suit middle-aged or elderly man; abstainer preferred. State salary required, age, height, etc.; vacancy about September 20. Apply, "H.," 300 Christchurch Road, Bournemouth.

**M**ANAGING Assistant for mining district; moderate hours; in or out doors. Apply, stating age, salary required, etc., to E. F. Jones, The Gilbert Private Hotel, Ilfracombe.

**M**ANAGER for a new country business in a quiet town; good class; Minor qualification essential; good experience and first-class references; preference given to married man, as house, gas would be provided. Apply, by letter only, giving full particulars of experience, age, and salary required, to "Pharmacist," c/o S. Maw, Son & Sons, 7-12 Aldersgate Street, E.C.

**Q**UALIFIED locum required for City business; four weeks from September 6; short hours. Apply, stating terms, to Manager, Lamplough's, 42 Fenchurch Street, London, E.C.

**R**ANDALL & SON, Pharmaceutical Chemists, Wareham, Dorset, are in want of a competent Assistant who has had good experience in Mixed Country Retail, with Oils, etc., and whose references will bear strict investigation. Please state salary required (in or out doors) and when disengaged.

**T**HE Guardians of the Poor of the Parish of St. Giles, Camberwell, invite applications for the appointment of a Dispenser for their Relief Station, 106 Peckham Park Road, S.E. Applicants must be qualified Dispensers. Salary £120 per annum, increasing £5 biennially to a maximum of £150. Forms of application can be obtained upon application here, and the same must, when duly completed, be returned to me not later than Saturday, September 11, 1909. Canvassing the Guardians, either directly or indirectly, is prohibited. By order,

CHARLES S. STEVENS,  
Clerk to the Guardians.

Guardians' Offices, 29 Peckham Road, S.E., August 25, 1909.

**U**NQUALIFIED Junior or Improver wanted immediately; must have served regular apprenticeship and be energetic and willing; short hours; close 2 o'clock Saturdays. Apply to Chemist-in-Charge, Drug-Department, Jones Bros. (Holloway), Ltd., Holloway, N.

**W**ANTED, qualified male Dispenser for Jessop Hospital for Women, Sheffield, to live out, mid-day meal provided; previous hospital experience will carry great weight. Apply, stating salary required, to the Secretary, 6 East Parade, Sheffield.

**W**ANTED, good all-round, competent Assistant, in about 4 to 6 weeks; energetic and up-to-date; not under 28; Prescribing, Photography, Optics, some Agricultural; good Counterman and Stockkeeper; permanency; hours 8 to 8, Saturdays 10 P.M., close 3 P.M. Wednesdays; no Sunday or Bank Holiday duties. Apply, with photo and experiences (none need apply without undeniable references), stating salary required (outdoors), Smith, M.P.S., Farnham, Hants.

**W**ANTED, Prescribing Salesman, for business purely Proprietary, to manage branch in Colliery district; state if married, salary (outdoors), if abstainer, experience, and enclose photo; South Wales. Alfred W. Lewis, Medical Hall, Newport, Mon.

**W**ANTED, a young qualified man, single, in a good suburban business; salary and commission; good prospects for energetic and pushing salesman; must be good window-dresser, used to Photography. Apply, stating full particulars, to E. Smith, 4 Gartmoor Gardeus, Southfields, Wimbledon, S.W.

**W**OMAN accustomed to put-up Chemist's stock. Apply by letter, giving full particulars, to "Globenaris," c/o Messrs. Cooper, Son & Co., Ltd., 80 Gloucester Road, South Kensington, S.W.

**Y**OUNG Assistant; qualified; good General experience; Scotch training preferred; outdoors; no Sunday duty. Cassie, 49 Newgate Street, London.

**H**ERE'S A CHANCE FOR BOTH SEXES!!!—Sanitary Inspectors—School Nurses—Lady Health Visitors. £100-£350. All those desiring change should qualify for above appointments; postal course of lessons now commencing for examinations in London and Provinces, Scotland, Ireland, and Colonies; 450 successful candidates; fully half had no previous sanitary knowledge; fee 25s. Mushens, Sanitary Expert, Sunderland.

**I**MPORTANT to Assistants.—5s. 6d.; bedroom and use of sitting room, dining-room, billiard-room, 10-ft. table; piano; bath (h. and e.); tennis; board as required. Mrs. Hosier, 36 Fitzroy Square, London, W.

## WHOLESALE.

**L**ONDON and Country Traveller required by Wholesale Druggist. Apply, stating terms, with particulars of connection and experience, to "Hustler" (177/7), Office of this Paper.

**A** LONDON firm of Wholesale Druggists require a young, energetic, and proved Salesman for Lancashire; applicants should give fullest particulars, and preference will be given to one Lancashire born and who has a good connection. 144/19, Office of this Paper.

**C**LERK required; temporary; one accustomed to Drug trade preferred. Apply, 176/24, Office of this Paper.

**D**RY-COUNTER hand, aged about 18, with experience in filling Export orders, wanted by London Druggists. Write full particulars of previous employment, wages expected, and if disengaged, to 172/40, Office of this Paper.

**Q**UALIFIED Assistant to put up Wet Poisons and to assist manager of the Wet Department. Apply, giving previous experience, age, wages required, to "Opium" (145/19), Office of this Paper.

**R**EPRESENTATIVE required by London Wholesale and Export Druggists to take up extra commission in Australia and New Zealand. Apply, stating experience, terms, etc., to 175/4, Office of this Paper.

**T**RAVELLERS for all parts of the United Kingdom, with connection among Chemists and Patent-medicine Vendors, for Patent Medicine, which will be extensively advertised, with proposition that will create a very large sale; terms, commission on all orders and repeats. State age, ground, and houses at present represented. "Lambda," c/o Hastings Bros., Ltd., King's Chambers, Portugal Street, Kingsway, W.C.

## SITUATIONS OPEN (continued).

**T**O Represent a high-class Speciality; young Chemist residing in London preferred; aptitude of more importance than experience. State particulars, but do not enclose photograph or testimonials, to 172/38, Office of this Paper.

**T**RAVELLER wanted, to call upon Chemists and Herbalists in Lancashire and Yorkshire; one who can purchase a small interest and with a connection preferred; salary, commission, and expenses. Apply, giving full particulars (in confidence), to 172/12, Office of this Paper.

**W**ANTED, three Representatives, covering all England, Scotland, and Wales, with extensive connection among Chemists, to carry two leading Specialities; small salary and good commission; articles well advertised; none but real salesmen with irreproachable characters need apply. Give full particulars (in confidence), firm or firms you are doing for, how often you cover your territory, etc., to "Caff' inc" (171/1), Office of this Paper.

**W**ANTED, an Assistant with a good knowledge of Chemistry, and preferably a fair acquaintance with Chemical apparatus. "H. M. R." (147/9), Office of this Paper.

**W**ANTED, promptly, by Holzmüller & Schmidt, Wholesale Druggists, 13 Rue de Sévigné, Paris, for Paris office, very active English-German Druggist, capable to manage India department and push sales to England and States; salary on commission, with a minimum of francs 275 per month guaranteed. For our Calcutta office: experienced, sharp English-German Druggist as buyer and accountant; good prospects to men with initiative; both posts require capable, shrewd men. Address above, with full particulars and references.

**Y**OUNG man or woman, with Retail experience, to take charge of workroom in a Wholesale Druggists' Sundries House; must be able to manage a large number of girls and to be able to design new lines, etc. "Workroom" (144/64), Office of this Paper.

## SITUATIONS WANTED.

1s. for 12 words or less; 6d. for every 10 words beyond, prepaid.

### RETAIL.

**S.** F. CLARK is open for Locum bookings or permanency early in September; best-class experience; highest references. Write or wire, c/o W. E. Humphrey (Telephone 174), Chemist, Cleethorpes.

**J**UNIOR: aged 21; all-round experience. Edwards, Larches Lane, Wolverhampton.

**Q**UALIFIED: 25; best Dispensing and general experience. Johnson, 36 Large's Street, Derby.

**L**OCUM, from September 12; unqualified; 21; good references. Walton, 1 Glynrhendda Street, Cardiff.

**U**NQUALIFIED: 24; near classes; good all-round experience. "Rhôsi," Central Pharmacy, Ambleside.

**Q**UALIFIED: 26; 5 ft. 11 in.; 10 years' experience; references; disengaged; outdoors. Simpson, Ruthin.

**L**ADY Dispenser: qualified; institution or doctor; testimonials. L. Constable, 38 Loveday Road, West Ealing.

**M**ANAGER, Locum, or Senior; experienced; 39; Major; good references. "T.", 178 New Kent Road, S.E.

**C**ONTINENT; season or permanency; qualified; undeniable references. Stephens, 131 Killigrew Road, Falmouth.

**J**UNIOR: 20; country preferred; Photography: good references; disengaged shortly. Matthews, Beaminster, Dorset.

**D**ISENGAGED; outdoors; unqualified; 32; good experience; 25s. weekly. "J. K.", 37 Kenton Road, Hackney, N.E.

**S**MART outdoor Assistant; accustomed to first-class Dispensing; town or country. "W." (172/8), Office of this Paper.

**L**OCUM; disengaged September 21; abstainer; excellent references. "Reliable," c/o Williams & Smith, Chemists, Horsham.

**C**HEMIST, elderly, desires engagement; experienced Manager; undeniable references. Reply, 171/32, Office of this Paper.

**P**ART-TIME; disengaged Wednesdays or Thursdays half a day; take charge; good references. 171/33, Office of this Paper.

**A**DVERTISER (24), with first-class West-end Dispensing experience, seeks Part-time berth. "Cautiously" (172/5), Office of this Paper.

**C**OUNTERMAN (26), good appearance, requires situation; good references; W. or S.W. preferred. Allen, 65 Scholars Road, Balham, S.W.

**L**OCUM or Part-time; qualified; excellent testimonials. 176/25, Office of this Paper.

**E**VENING work; Stock or Clerical; good experience. "G.", 44 Gainsford Road, Walthamstow.

**D**ISPENSER and Surgery Attendant; experienced. "W. H.", 26 St. Paul's Road, Canonbury, N.

**Q**UALIFIED; 24; tall; disengaged middle September. Peake, 34 High Street, Notting Hill Gate, W.

**L**OCUM; qualified; disengaged September 6; 14 days; South Coast. "Aspirin" (177/3), Office of this Paper.

**R**ELIEF; days, half-days, weekly, evenings, Sundays; moderate. Thompson, 17 Ranelagh Grove, Belgravia.

**U**NQUALIFIED; lady; shortly disengaged; good experience; Dispensing, Retail. 177/5, Office of this Paper.

**L**OCUM; reliable; qualified; well recommended; disengaged September 6. "Chemist," 168 Ditchling Road, Brighton.

**A**S Manager in sound Retail, view early succession; nice neighbourhood and good house desirable. 175/32, Office of this Paper.

**A**DVERTISER, exceptionally adapted to promote business; excellent Prescriber. "J. K.", 168 Wood Street, Walthamstow.

**H**ALL qualification; aged 46; outdoors; single; good experience; London or near; abstainer; 42s. weekly. "S.", 143 Broadway, Hanwell.

**F**REE half-day weekly; tall; obliging; Photographic, Dispensing; not afraid of work. "Immediate" (177/18), Office of this Paper.

**W**ALES or Vicinity.—Locum; permanency; disengaged August 27; 16 years' experience. Jones, Heulwen, 7 Dyffryn Street, Pontlottyn, Glam.

**I**MPROVER (18), with knowledge of Dispensing, Photography; seeks situation in Retail shop; disengaged September 1. 173/32, Office of this Paper.

**I**MPROVER; indoors; 19; Preliminary passed; Dispensing, Counter; experience; moderate salary; excellent references. 175/29, Office of this Paper.

**U**NQUALIFIED; good all-round experience; Photography; London or South Coast preferred; outdoors; disengaged; good references. 173/22, Office of this Paper.

**U**NQUALIFIED; married; 17 years' experience; Locum or permanency; Prescribing, Extracting, and Dispensing; excellent references; North preferred. 173/37, Office of this Paper.

- T.** BEECH; 47 Clarence Road, Moseley, Birmingham, disengaged; good all-round trade.
- L**OCUM; qualified; reliable; disengaged 30th inst. "Statim," 14 Brewer Street, Maidstone.
- L**OCUM; qualified; young; disengaged September 12 to October 4. Sheasby, Lansdown, Stroud.
- J**UNIOR or Improver; 18; North of England preferred. Iugham, 122 Burnley Road, Todmorden.
- A**SSISTANT; outdoors; town, country, or abroad. Marcus, Lawn View, Belle Vue, Shrewsbury.
- J**UNIOR; 20; 4 years' experience; good Counterman; disengaged. Harlow, Station Parade, Harrogate.
- D**ISENGAGED; unqualified; several years' experience. R. M. Lelean, 11 Princess Road, Leicester.
- Q**UALIFIED; 23; London and provincial experience; outdoors. McCarthy, Calder Street, Blackburn.
- M**ANAGER; qualified; 30; tall; good all-round experience. Whittingstall, Painthorpe, Wakefield.
- L**OCUM; temporary, permanent; not afraid of work; 38; disengaged. 10 Bedford Road, West Ealing.
- A**SSISTANT; 8 years' varied experience; good references. "Unqualified," 81 De Grey Street, Newcastle-on-Tyne.
- D**ISPENSER (lady); disengaged; qualified; good testimonials. A. Failsorth, Stafford Place, Weston-super-Mare.
- L**OCUM; qualified; disengaged September 15; experienced. Whitchouse, c/o Sturdy, Chemist, Woodhouse, Sheffield.
- I**MPROVER, just out of time, requires situation in good-class country business. R. Ling, St. Margaret's, Bungay, Suffolk.
- S**MART Mauager; 26; in or near Loudon; good Dispensing and Photographic experience. "Pharmacist," 14 Merton Road, Wandsworth.
- M**ANAGER; Dispensing, Photographic; all-round experience; disengaged; abstainer; 30. "M.P.S." 195 Kettering Road, Northampton.
- L**OCUM, disengaged September 20, for holiday duty or short permanency; best references. Apply, Follows, M.P.S., Tunstall, Staffs.
- Q**UALIFIED; 22; disengaged; 7 years' experience, 3 years West-end Dispensing; outdoors; in S.W. or W. London. Slade, 72 Caithness Road, Mitcham.
- A**SSISTANT; 36; experienced in Dispensing, Counter, and Photographic trade; active, energetic; unqualified. "Statim," 22 Surrey Road, Bishopstone, Bristol.
- E**XPERIENCED; 14 years in last situation; aged 39; unqualified; "W.G.S." Victoria Chambers, Paignton.
- M**ANAGER; thoroughly competent; Major qualification; abstainer; married; unexceptionable references; reasonable salary expected. Address, H. Hamilton, 26 Clarence Road, Seacombe.
- A**SSISTANT; 38; good appearance and address; unqualified; excellent references; West End and suburban experience; 35s.; disengaged end of September. "A." (171/21), Office of this Paper.
- A**SSISTANT or Branch; 25; unqualified; 9 years' experience, Photography, Dispensing; abstainer; married; permanency; disengaged; references. W. A. Blakeley, Dodsworth Hill, Normanton.
- A**SSISTANT (aged 19) requires situation in high-class Store business; has had 4 years' with Pharmaceutical Chemist from London and Paris; knowledge of Photography. Apply, 172/2, Office of this Paper.
- G**ERMAN qualified Chemist (completed military service), type-writing, shorthand, French, Photography, now engaged in Manchester as German correspondent, desires position; small salary. W. Netz, 55 Cecil Street, Manchester.
- Q**UALIFIED Military Dispenser (pensioner sergt.) requires situation as Dispenser, Wardmaster, Steward, private practice, institution, or Dispensary, at home or abroad; or Manager of Drug-store; good Prescriber and Extractor; highest references obtainable; married, one grown-up child. 171/37, Office of this Paper.
- M**ANAGER; qualified; Newcastle or district; disengaged October. Hunter, Chemist, Chopwell, Co. Durham.
- Q**UALIFIED; young; disengaged shortly; good all-round experience. Address, 173/27, Office of this Paper.
- L**OCUM or Manager; experienced; references; qualified; disengaged. "Dispenser," 4 Limekiln Street, Dover.
- Q**UALIFIED (26), experienced, disengaged, desires West-end berth. "Allround" (175/7), Office of this Paper.
- U**NQUALIFIED; 32; all-round experience; country preferred. "Mistura," 292 Dallow Street, Burton-on-Trent.
- D**ISENGAGED; good-class country experience; unqualified; abstainer; neat worker. Vawson, Elwyn Road, March.
- Q**UALIFIED; middle-aged; varied experience; good appearance and address. "Tenth," 3 Canterbury Road, Southsea.
- A**SSISTANT (23 $\frac{1}{2}$ ), good Salesman, Dispensing, Photography, desires permanency. Alexander, 12 Fairfield Road, Beckenham.
- I**RELAND preferred; Pharmaceutical Chemist; aged 29; smart Salesman, Dispenser, good Prescriber. Address, 174/36, Office of this Paper.
- J**UNIOR; 20; tall; all-round experience; good references; disengaged September 13. W. E. Davis, Oakfield, 63 Penybank Road, Ammanford.
- P**HARMACIST; disengaged middle September; good-class all-round experience; abstainer; 23 $\frac{1}{2}$ . "Competent" (169/8), Office of this Paper.
- A**SSISTANT (22) requires situation after September 14; out-of-doors; time for study; good references. Thomson, Manor House, Tenterden, Kent.
- R**ECOMMENDED; unqualified; part-time; near school in the North; Dispensing and Counter; aged 21. Walkiushaw, 25 Bell Street, Henley-on-Thames.
- A**S Manager; London (City or West End preferred); best references; 35; qualified; disengaged from September 15. J. B. Davis, 17 King's Road, Chelsea.
- Y**OUNG lady (22) seeks engagement with Doctor or institution; unqualified; 4 $\frac{1}{2}$  years' experience; knowledge of Bookkeeping. Apply, 175/2, Office of this Paper.
- J**UNIOR; 22; tall; Harrogate experience; Dispensing, Practical Photography, Counter; good references; disengaged September 13. Thompson, 29 Unity Grove, Harrogate.
- D**ISENGAGED; 24; City, West-end, and Store; Prescriber, Dispenser, Window-dresser; Photographic, French; highest references; outdoors. 172/25, Office of this Paper.
- S**URGEON'S Dispenser (certified) or Locom; single; reliable; experienced; excellent testimonials; disengaged September 1. Address, "Binalaur," 320 Kentish Town Road, N.W.
- D**ISENGAGED September 9; Assistant (outdoors), Locum (in or out); qualified; aged 38; all-round experience. "Veronal," c/o Mr. Weston, Chemist, 151 Westbourne Terrace, W.
- E**DINBURGH (in or near).—Junior seeks engagement; Photography, Dispensing, Counter; highest references; capable; about 22. Wilson, 2 Vicarage Street, Stockton-on-Tees.
- G**ERMAN (27), very energetic, speaking French fluently, 10 years in the profession, requires situation for October 1. Write, Bruno Kasten, Pharmacie Centrale, 59 Bd. Pasteur, Paris.
- Q**UALIFIED; aged 22; 5 years' high-class experience, Photography; highest references; Southern Counties preferred; outdoors. Hughes, 165 Edburton Avenue, Preston Park, Brighton.
- D**ISENGAGED; Locum or otherwise, Manager or Senior Assistant (10 years unqualified manager); aged 33; good references; will work up branch. "Extractor," 68 Norman Road, Ilford Lane, Essex.
- A** MIDDLE-AGED M.P.S., at liberty about September 23; 20 years as Manager; 10 years in cash Drug trade; total abstainer; energetic worker; can give good reference. Apply, 174/17, Office of this Paper.
- A**SSISTANT, Branch Manager; experienced; Counter, Dispenser; unexceptionable reference last berth; 31; tall; abstainer; married; moderate salary; unqualified. "Reliable" (173/14), Office of this Paper.
- A**DVERTISER wishes to recommend competent, conscientious, and gentlemanly Assistant; he has had excellent Dispensing and general experience in West-end, and possesses knowledge of Photography, Dentistry, and manufacture of Mineral Waters; not afraid of work; moderate salary; aged 27; disengaged. Apply, "Advertiser," George Street Pharmacy, Ryde; or "Assistant," 34 Grafton Road South, Plaistow, E.

# SITUATIONS WANTED (continued).

## WHOLESALE.

**P**ORTER; accustomed to a Chemist's business. "H. E.," 82 Field Road, South Kensington.

**A**LL-ROUND Assistant and Stockkeeper; disengaged; suit small Wholesale; City references. 177/8, Office of this Paper.

**S**I T U A T I O N required; 19; 4 years with Wholesale Druggists' Sundries house; good references. "S. K.," 36 Jennings Road, East Dulwich.

**I**ADY requires responsible post; 10 years' experience, last 4½ years, in Wholesale Druggists'. "L. E.," 46 Tembury Road, Tottenham, N.

**G**ERMAN (23) desires position as Assistant or Clerk in Wholesale or Retail business. Apply, M. Möller, Post Office, Exhibition Rond, S.W.

**W**EET Counter; young man requires situation; good experience; 8 years in West-end house. "H. D.," 147 Arlington Road, Camden Town, N.W.

**A**BROAD; South America preferred; German; 24; 2½ years' English experience; Wholesale or Retail; willing to pay passage. "Abroad" (172/24), Office of this Paper.

**A**SSISTANT; 25; Wholesale; disengaged; well up in all departments, or as Traveller; 5 years' practical experience; excellent references. Norrie, 176a Queen's Road, Battersea.

**C**HEMICAL and Scientific Apparatus.—Young man as Assistant Warehouseman, Stockkeeper; assist counter; used to stockkeeping; long experience. "W. W.," 193 Vallance Road, E.

**C**H E M I S T; extensive practical experience in London house; Manufacturing Laboratory, Packed Specialities, or Warehouse; able worker; efficient organiser. 170/24, Office of the Paper.

**A**DVERTISER (24), with first-class Retail experience and thorough knowledge of Retail trade, seeks post in Wholesale; energetic and businesslike. "Graciously" (172/50), Office of this Paper.

**T**R A V E L L E R, with excellent Midland connection, wishes to Represent good house; Drugs, Sundries; experienced in all branches; up to date; or commissions; with expenses. "Tact" (169/9), Office of this Paper.

**A**USTRALIA. Pharmaceutical Chemist, abstainer, thorough knowledge Wholesale, Retail, including office and travelling, desires to Represent good house in this colony; highest references. 175/22, Office of this Paper.

**A**DVERTISER, 15 years' first-class experience, Drugs, Chemicals, Specialities, Packed Goods, etc., Wholesale, Retail, and Export, seeks position as Departmental Head or Second in Wholesale or Export house; accustomed to control; energetic. Address "Vigilant" (174/32) Office of this Paper.

**R**E PRESENTATIVE, 12 years' connection, personally known to best buyers, Lancashire, Yorkshire, and part Midlands, over 5 years present firm, open to engagement by good house; or would Represent another firm with present one, on half salary and expenses; highest references. 175/35, Office of this Paper.

**T**R A V E L L E R, representing well-known London firm in four Northern Counties and principal towns in Scotland, requires additional Agency, not competing with Toilet Soaps and Skin Preparations; part expenses and commission; thorough knowledge of the drug-trade. Apply, "Novo Castra" (173/39), Office of this Paper.

## MISCELLANEOUS.

**M**CADAM & TUCKNIS, Sharedealers, 30 Tranquil Vale, Blackheath, S.E. Telephone 81a Lee Green.

**S**HARES FOR SALE (free of commission, subject).—190 Allen & Hurnby's "A" Preference 25s., 170 "B" Preference 24s. 7½d., dividend due September; 43 Camwal Ordinary, 1s. 6d.; 150 Idris "A" Ordinary 2s. 10½d., 300 "A" Prefs. 5s. 9d.; £133 4 per cent. Debenture Stock, £69 per £100 Stock; 100 Parkes Drus 6 per cent. Prefs., 16s. 10½d.; 100 Virol Ordinary, 7s. 3d.

**W**ANTED (subject). 50 Ayrton, Saunders Preference, 17s. c.d.; 5 Camwal Debentures, £52 10s. x.d.; 500 Claudius Ash Preference, 22s. 3d.; 50 Dental Manufacturing, 90s. paid, 99s.; 100 Lewis & Burrows Preference, 10s. 9d.

List of shares for sale and wanted sent free on application, Bankers, London County and Westminster. Established 1898.

**C**OMPLETE FITTINGS FOR SHOP.—In excellent condition; as good as new; 12-ft. drug fitting, 6-ft. wall-case, 6-ft. screen and counter, 8-ft. serving-counter, perfume-case and desk; £30 the lot; a great bargain. PHILIP JOSEPHS & SONS, LTD., 93 Old Street, London, E.C.

**W**E HAVE WHAT YOU REQUIRE, Drug Fittings, Counters, Wall-cases, Dispensing-screens, Perfume-cases, etc., in almost all sizes; second-hand; condition first-class; prices reasonable. Write for sketches and details giving approximate sizes, or call and inspect. RUDDUCK & CO., 262 OLD STREET, E.C.

**P**LATE-GLASS Shelves, Window-fittings, Carboys, Counters, Drug-fittings, Dispensing-screens, Wall Cases; second-hand; send for list; cheapest house for high-class fittings; complete Chemist fitters; estimates and designs free; men sent to all parts. TREBLE & CO., Shop-front Builders, 3 Great Tower Street, London, E.C.

**P**OISONS and Pharmacy Act, 1908. With Notes by H. Wippell Gadd, Barrister-at-law. A Practical Handbook for Business Men and Students. Price 1s. net. London: Baillière, Tindall & Cox, 8 Henrietta Street, Covent Garden.

**P**ROFESSIONAL PRELIMINARY EXAMINATION.—For most rapid and successful preparation (Correspondence or Oral) join the U.K.C. (United Kingdom College), Lavender Hill, London, S.W. 6,500 successes. All papers corrected by specialists. Work in each subject graded to suit individual requirements. Special attention given to weak subjects. Special terms quoted to those mentioning this paper. Apply Principal, U.K.C., Lavender Hill, London, S.W.

**T**O APPRENTICES, JUNIORS, ETC.—If you wish to pass the Preliminary quickly and with little trouble, write to Mr. Charles Harker, who will coach you by post; thorough systematic teaching; numerous successes in 3 and 6 months; special attention given to those of neglected education; 85 per cent. recent successes; terms very moderate. Charles Harker, 239 Chapter Road, Cricklewood, London, N.W.

**M**MR. NOVE, of 10 Cecil Street, Oxford Road, Manchester, begs to inform Chemists practising Dentistry that he has opened a new Laboratory of Mechanical Dentistry, with all modern appliances; first-class materials and workmanship; lowest prices; list on application; correspondence invited.

## TESTIMONIAL RECEIVED THIS WEEK.

A Pharmacist writes: "I must say that I welcome your hints and smart ideas more than orders accompanied by remittances." That is what you want to increase the sales of your own Specialities, and therefore your profits. Have you sent for a copy of my Booklet "HOW TO INCREASE YOUR BUSINESS," post free on receipt of post card to Pharmacists? This shows how you are able to obtain the services of a Pharmacist like yourself to help you suggestions for new Specialities, systematic advertising, and attractive window displays to increase your business. Reference to the Pharmacist who gave the above testimonial if required.

J. R. B. ALLISON, Pharmacist & Business Specialist, RETFORD.

**GUMMED PRICE TICKETS**

Crimson ground, white figures. Stocked in all usual prices up to 21s., each price banded separately in hundreds.  
1/- The Midget, 5d. per 1,000  
The Standard, 16/-  
The assorted 10 pieces.  
Full illustrated list of Blanks for use with these tickets free on application.

DUDLEY & CO., Ticket Writers & Printers, Holloway, London

## JOHN PARKES & CO. PRIORY WORKS, WARWICK

Beg to state they have purchased the Letter Press Printing Business and Plant of MARTIN NEWHEY, 14 New Street, Birmingham, and are prepared to execute a select amount of work for their regular customers and others. Enquiries solicited.

**SPECIALITIES:** Handbills, Memo Forms, Bill-heads, and all advertising Matter.



## I AM LOOKING AT YOU

my reader, and wondering why you have not applied for my booklet, THE DOOR TO SUCCESS.

Is it a question of incredulity, is it lack of energy, or have you really as much business, and particularly of profit, as you want? Chemists to the King, local Presidents of Ph. Society use my methods of INCREASING BUSINESS. If they do not consider them *infra dig.*, surely you needn't.

In any case, supposing you waste one minute and one halfpenny in sending a postcard for it, and spend a few minutes on its arrival in reading it. Not much to ask you. Will you oblige me by writing that p.c. now?

**BERNARD SLACK,**  
Princes Chambers,  
WOLVERHAMPTON.

## The Chemists' Assistant in Canada.

By One of Them:

In the Dominion of Canada the English qualification is not accepted, but the Council may grant what is called a "Certified Clerk's Licence" on presentation of the Minor or Major certificate. This formality usually takes up some considerable time, and even then it does not allow the holder to manage or take charge in the absence of the proprietor, who must be a graduate in the Province in which he resides. This licence only holds good for one Province, so that having qualified in Ontario as a Major man, the holder can only obtain the licence of a "Certified Clerk" in the next Province, when he has gone through the curriculum prescribed and becomes a licentiate for the Province in which he resides. The same law regulates the medical and dental professions. As regards the Province of Quebec, the population of which is largely French, it is quite necessary to speak the two languages, very few drug-store proprietors knowing English. The hours of business in Montreal are usually from 8 A.M. to 11 P.M., with Sunday duty

and those who are not teetotallers will find alcoholic beverages about double the price they are at home. St. Catherine Street, Montreal, is the street for English chemists to make an early acquaintance with, and in the streets leading from it will be found good accommodation at from \$6 to \$7 per week, including board.

## Irish Licence Examination.

THE following are the questions in the oral and written portions of a recent Licence examination of the Pharmaceutical Society of Ireland, which were satisfactorily answered by J. J. B. (136/37):

*Materia Medica and Botany* (two hours allowed).—  
 1. Enumerate, in tabular form, the constituents of opium, and give the percentage of each. 2. Describe minutely the characters of digitalis folia and state their composition. 3. Enumerate, in tabular form, the volatile oils procured by distillation from (a) leaves, (b) flowers, (c) fruit, (d) leaves and flowers. 4. Strophanthi semina: write what you know regarding them under the headings (a) character, (b) composition, (c) preparations. Describe pollen grains under the headings (a) structure, (b) contents, (c) shapes, (d) colours. 5. Give a diagrammatic section of a flower showing a hypogynous corolla. 6. Define the terms (a) epigeal, (b) plurorhizal, (c) syngenesious, (d) anemophyllous, (e) epiphyte.

*General and Pharmaceutical Chemistry* (one and a half hour).—1. How is potassium bitartrate obtained? How would you prepare from it (a) tartar emetic, (b) Rochelle salt? 2. Show, by equations, the reactions that take place when the following solutions are mixed: (a) Ferric sulphate and ammonium sulphide, (b) arsenious oxide and ammonium sulphide, (c) silver nitrate and sodium thiosulphate, (d) copper sulphate and potassium iodide. 3. Explain the construction of the Fortin or Kew barometer and detail what corrections you would make in reading the same. 4. How would you determine the solubility of lime in water at different temperatures? 5. What volume of oxygen at 15° C. and 720 mm. pressure will be required for the complete combustion of 10 grams of marsh-gas? 6. Give in detail Reinsch's test for arsenic.

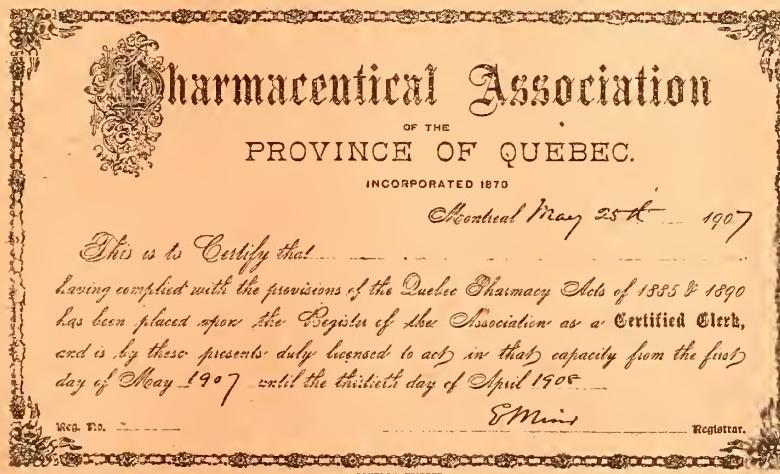
*Pharmacy* (two hours).—1. Ext. cinchonæ liq.: give preparation, with reasons for the use of the acid, the glycerin, and the temperature employed. 2. State how many kinds of distillation there are in the British Pharmacopœia, and define them. 3. Give your comments on the following prescriptions, and state how you would compound them:

Quininæ valerianatis	...	...	...	gr. ii.
Caffein. citrat.	...	...	...	gr. ii.
Ft. pil. Mitte x. tales.	...	...	...	...
Potass. brom.	...	...	...	gr. viij.
Ammon. brom.	...	...	...	gr. viij.
Sodii brom.	...	...	...	gr. viij.
Infus. aurantii ad	...	...	...	xxvij.
Spt. chloroformi	...	...	...	xxvij.
Misce.				

4. What is gossypium? State what you know as to its preparation. 5. How would you dispense in pill form potassium bichromate and potassium permanganate? 6. Liq. calcis saccharatus is often of a brown colour; how would you avoid this? 7. What do you understand by "liq. hydrogen peroxid. 10 vols.," "acid. hydrocyanic. dil. 2 per cent.," and "a decimal solution"?

*Practical Chemistry and Dispensing* (one and a half hour each) were taken on the second day. In the former a solution of arsenious oxide was provided for the quantitative estimation, while the mixture for analysis proved to be bismuth salicylate and sulphonal—at least, these were the substances reported. The "dispensing" paper contained the following: (1) Mist. ammoniaci 3vij.; (2) a blister for each ear; (3) a tooth-powder; (4) Blaud's pills, thirty-six.

The oral examination on the third day in *Pharmacy* was conducted by Mr. Brown and Mr. Allen. After three questions on the poison schedules, a few doses, mostly poisons, were asked. Then questions on the principles of the nitrometer and the maceration-process for tinctures. How many tinctures have you made; and why do you not press the marc in making tr. myrrh.? Why are raisins freed from seed before use in the preparation of tr. card. co.? How do you make Easton's syrup, syr. ferri iiodid, and liq. Donovani? Give strengths. Several pill-masses were then given for recognition, with questions as to their ingredients. How do



divided. Situations are almost entirely outdoor; and the cost of a small bedroom is from \$2 to \$3 (say 8s. to 12s.) per week, or with board about \$6 to \$7. Boots are cleaned by oneself, but some pay 10c. at a shoe-store. Dress is thought a great deal of, and is very expensive. The usual plan is to have two or three suits and have one of them cleaned and pressed every week, for which \$1 a month is paid. The laundry is usually run by Chinese, whom the writer always found honest and obliging, but shirts and collars have a short life in their hands.

A little advice is necessary to the new-comer. First of all, "talk little about home, and let those with whom your daily work lies know that you have come for the purpose of falling in with their views. Do not try to teach them, for they will be able to teach you a good deal of practical business." A knowledge of photography and optics is very useful, but dentistry is of no use unless a qualification is taken out in the Province. High prices are charged for the simple extraction of a tooth. On this point, doctors in the small towns are exceedingly jealous. I consider dispensing much easier than at home. I was about two years in one of the largest dispensing-houses in Canada, where practically all the extracts were standardised and much easier to dispense. They are more accurate in strength than the old B.P. extracts, which vary considerably in degree of hardness according to extreme heat or cold. Cachets and triturates are very largely prescribed, and the prices are fair. Suppositories I never saw made by the melting-process, but by pressure, and you can promise a dozen suppositories as quickly as a dozen pills. Plasters are very seldom spread, but are still used, the well-known makers supplying necessary requirements. It is advisable on landing to make the acquaintance of the Secretary of the Pharmaceutical Society, Ontario Street, Montreal, and ask him, in view of your qualifications, what to apply to the Council for. It is also advisable to take the qualification of the Province you are in as soon as possible. Canada wants young men, not those who have spent the best days of their lives in another country.

As a rule, men go to Canada with the fixed idea that they will quickly get employment; but it may be necessary to wait several weeks before a suitable situation is found, especially if attention is confined to the Province of Quebec only. It must be remembered that a trip from Montreal to Winnipeg is almost as expensive as one across the Atlantic. The winters are very cold, but dry, while the houses are warmed with hot-air or water pipes. Total abstainers are largely sought after,

you make ext. sarsaparilla? Why is glycerin added? Why are castor oil and alcohol added to pil. hyd. subchlor. co.? How is citrine ointment made? The preparation of zinc ointment was also asked, and why lard is used instead of paraffin. How is syr. calcii lactophos. made?

In Prescription-reading four prescriptions were given, containing two overdoses and an incompatible. How would you dispense them? Also another prescription to turn into full Latin.

*Materia Medica and Botany.*—About ten specimens of drugs were given for recognition, and questions asked regarding the active principles of each and their pharmacopeial preparations, with strength. State the percentage of strychnine in each of the preparations of nux vomica, also their doses. What are the chemical constituents of fixed oils

and fats? Six flowers were given to be placed in their natural orders, with reasons for doing so. What is the difference between a corn and a bulb? Explain the reproduction of a fern. Explain what is meant by the processes of assimilation and respiration. The slide under the microscope proved to be a transverse section of the stem of a rush.

*Chemistry* followed. What is Avogadro's Hypothesis? Explain vapour-density and how it is determined. What is a monatomic alcohol? The preparation of chloral hydrate, with equations and likely impurities. How is the Nessler test for ammonia in water applied? State Boyle's Law and Charles's Law. Then came questions on latent heat and specific heat; also the action of acids on the various metals. Mention the laws of diffusion of gases. How is iodine prepared, with equations? Explain the tests for arsenic.

## EXCHANGE COLUMN: BARGAINS

TERMS.—One halfpenny per word with name and address. One penny per word if we register the address and attach a number. No Advertisement inserted for less than 6d.

### FOR DISPOSAL.

#### BOOKS AND PERIODICALS.

VOLS. III. and IV. "Chemist and Druggist," Nos. 29 to 52 complete, 1862 and 1863; what offers? CORDEN, Pulborough.

#### DENTAL.

SIXTEEN good forepaws; grand condition; first p.o. for 1s. 9d. each. "EXTRACTOR," 68 Norman Road, Ilford Lane, Ilford, Essex.

#### FORMULÆ.

VETERINARY formulae; marvellous lotion; magic oils (2 guinea recipe); 1s. 6d. each; 6 others 3s. 6d.; 5s. 6d. the lot. WHITE, Hawthorn Avenue, New Sawley,

#### OPTICAL AND PHOTOGRAPHIC.

QUARTER-PLATE Esign roll film camera, with Aldis lens; 5 by 4 magazine Bullard camera: 1 by 1½ Klito camera; all slightly shop-soiled; what offers? SUTCLIFFE, Chemist, Bacup.

#### PROPRIETARY ARTICLES.

TWELVE Angier's tablets 7s. 6d.; 12 2s. 3d. Ferroleum (shop-soiled), 6s.; 1 4s. 6d. Warner's, 2s. 6d.; 11 2s. 3d. Johnson's dysp. tablets, 11s. MORTIMER, Chemist, Batley.

#### SHARES.

SHARES for Sale. See p. 78.

### SHOP FITTINGS.

SECOND-HAND drug-drawers for sale; also doorway showcase. Offers, CROUCH, 47 Gresham Street, E.C. NINE plate-glass shelves, shaped; outside ruby lamp, with bracket complete. WILCOCKSON, Chemist, Southampton.

### MISCELLANEOUS.

BATH CHAIR for sale; good condition; cheap. ROBERT HUNT, Netherfield, Nottingham.

6-LB. black feeder-tubing; 7s. 1b., carriage paid. MEACHEN, 40 Cavendish Drive, Leytonstone.

BARNETT & FOSTER'S soda-water machine, siphon filler; Crossley's gas-engine, £40; half-gross secondhand siphons, 6d. each. BURGE, 123 Shirland Road, Paddington.

### WANTED.

DENTAL chair wanted for cash. ROBERT HUNT, Netherfield, Nottingham.

BOOKS for the Minor. State particulars and price, SYMMS, Eaton Hill, Tarporley.

DR. HALE'S meat and malt wine with quinine. State quantity and lowest price to E. GERNISH, Chemist, Bideford.

MINOR, Major, Chemists' books.—Send prepaid for valuation; cash offers per return. GOWER, Bookseller, Waterloo, Liverpool.

BACK number of "Chemist and Druggist," published on March 10, 1900, containing an article on Boer medicines. State price to SPECIALLY, Bishop's Stortford.

FORMULE purchased; hair lotion, dye, or dressing, skin-food cream, cosmetic lotion; good price. Particulars to W. LEWIS, 12 Sheldon Street, London, W.

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4-oz. Bottles, 33/- 10-oz. Bottles, 66/- per doz.

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EVERY GENUINE PACKAGE



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preparations,  
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BEST AND  
MOST RELIABLE

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OFFICE: 42 CANNON STREET, E.C.

SATURDAY, AUGUST 28, 1909

**PUBLISHER'S NOTICE TO ADVERTISERS.**

Advertisers are desired to take note that the advertisements of Businesses for Disposal and Wanted, Situations Open and Required, Exchange Column, &c., belong to the PREPAID CLASS, and to ensure the due insertion of the announcements the remittances must accompany the instructions. A great amount of unnecessary correspondence is occasioned by the non-observance of this regulation, and the Publisher hopes that the advertisers will assist in the quick preparation and despatch of the Supplement by strictly observing this rule. Advertisements for the current issue cannot be received after 4 p.m. on Thursday in each week.

A Copy of this Supplement is inserted in every Number issued of "The Chemist and Druggist."

A financial surplus  
is ensured by advertising  
in this Supplement.

IT PAYS TO PAY TO ADVERTISE HEREIN.

## **CHEMISTS' TRANSFERS.**

**Messrs. ORRIDGE & CO., 56 Ludgate Hill, E.C.**

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

1.—MIDDLESEX (Few Miles Out).—Up-to-date Pharmacy; position unique; returns £1,500 per annum; net profit £350; comfortable residence, held on lease; price £900, or valuation if preferred.

2.—LONDON, S.E.—Main thoroughfare; ready-money Business; returns (present rate), £1,000 per annum; profits above the average; double-fronted shop; modern fittings; rent £55; price £600; part payment entertained.

3.—LONDON, N.W.—Position unique; good-class Business; Retail and Dispensing; established many years; gross receipts £900 (present rate); scope for development; attractive, well-fitted shop, fully stocked; convenient house, held on long lease; price £750.

4.—LONDON, S.E.—Ready-money Business; Retail and Prescribing; returns exceed £600 per annum; profit (net) £200; attractive window; excellent position; satisfactory reason for disposal; price £350, or near offer; part payment if desired.

5.—LONDON, N.W. (Residential Suburb).—Good middle-class Business; Retail, Dispensing, and Photographic; returns between £1,900 and £2,000 per annum; modern-fitted shop; roomy house; price £1,200.

6.—SOUTH LONDON.—Very old-established Business, chiefly ready money; returns average about £1,000 per annum; early sale desired; price £500, or valuation of stock and fixtures.

7.—RICHMOND (Surrey).—Established Business; Retail, Dispensing, and Photographic; returns £700; good opening for modern trading; well-fitted shop, double fronted; terms, lease and goodwill £50, stock and fixtures at valuation.

Particulars of any of the above will be furnished on application.

**N.B.—NO CHARGE TO PURCHASERS.**

## **VALUATIONS FOR STOCKTAKING.**

Messrs. O. & Co. desire to emphasise the necessity of a Periodical Statement of Account, by which means alone Profit, the value of Business, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted, and eventually becomes the cause of confusion and loss.

Messrs. O. & Co. are prepared to undertake these essential duties, and will make Special Terms for such services.

**ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.**

8.—BUCKS.—Mixed Business; established 1804; returns average £940, which produces a net income of £300; commodious residence with lovely garden; satisfactory reason for disposal; price £700.

9.—SOUTHSEA.—Death Vacancy; Cash Retail and Prescribing Business; returns about £325; scope for large extension; rent £30 yearly; early sale desired; reasonable offer entertained.

10.—WESTERN COUNTIES (Vendor Retiring).—Retail and Dispensing Business; all good-class trading; returns exceed £1,400 yearly; scope for development; terms, lease and goodwill £50, stock and fixtures at valuation.

11.—CAMBRIDGE (Within Easy Distance of).—Mixed Business; entirely unopposed; returns £1,115; net profit £250; double-fronted shop; good residence; garden; rent £35; price £450; part may remain, say £150.

12.—WORCESTERSHIRE.—Vendor retiring; old-established Business; returns average between £1,000 and £1,100 per annum; excellent profits; terms, valuation of stock and fixtures, and a sum for goodwill to be arranged equitably.

13.—DERBYSHIRE.—High-class Pharmacy; held by vendor many years; returns under management £700; the shop has double front, is well fitted, and fully stocked; valuation terms entertained.

14.—GLOS.—Old-established Business; Cash Retail and Prescribing; returns between £750 and £800; gross profit 40 per cent.; well-appointed shop, double fronted; excellent house; held on long lease; price £650.

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Telegrams, "Brett Leicester." Telephone 160 Y.

VALUATIONS have always had our special and personal attention, and an experience of thirty years is at your disposal.

AGENCY.—We have always a large number of Buyers on our books, and we can frequently find a Purchaser at once. We also have a Private Register for vendors who are in no hurry to sell, and who do not wish their businesses to be advertised.

## STOCKTAKING SPECIALISTS to the Entire DRUG TRADE

1.—WEST MIDLANDS.—One of the finest Businesses in the district; pretty market town; very nice Family Retail, Agricultural Photo, little Wholesale and Mineral-waters; excellent shop and premises; returns considerably over £2,000; price, goodwill and valuation, about £1,900; very profitable; vendor will consider partner with £1,000; references required.

2.—YORKS (on the borders of Lancs).—A very nice General Retail, with splendid sale of own Proprietaries; good house and large shop; returns under manager £925; very profitable; price £50, and stock and fixtures at valuation; good business to be done in Optics.

3.—DEVON.—Good-class Light Retail and Dispensing; old-established; very nice convenient house and large garden; returns nearly £1,000; net profit over £300; valuation, about £850; part can remain; low rent; an excellent opportunity.

4.—HERTS.—Good-class Family Retail and little Photo; good shop; nicely fitted; low rent; returns £700; net profit about £200; price £400; genuine; chance seldom occurs.

5.—LANCS.—General Light Retail in busy manufacturing town; nice shop; main street; low rent; returns £1,200; profitable; price about £550; or valuation; splendid opportunity.

6.—LANCS.—Good General Retail, with Wholesale in Carded Goods and Sundries, with small shops; nice shop and premises; returns about £2,000; price valuation (about £500); a great bargain.

7.—GLOUCESTERSHIRE.—Very nice Retail, Dispensing, and Prescribing in very pretty district; returns nearly £800, and steadily increasing; good profits; good house and shop; price £650; an excellent business.

8.—SURREY.—General Light Retail, Prescribing, and little Photo; no serious opposition; convenient house; old-established; returns £600; net profit £200; price £250.

9.—WANTED, within easy distance of Leicester, a good General Retail, Dispensing, etc., Agricultural not objected to, showing a net profit of from £250 to £350; a client waiting to buy such a business at once; the transaction would be conducted without any publicity whatever.

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Telephone: No. 27 Victoria. MESSRS. MEGGESEN & CO.  
MESSRS. BARCLAY & SON, LTD.

MIDLANDS (Health Resort).—Excellent Dispensing Business; lock-up shop, well fitted; central position; rent £65; death vacancy; increasing returns, about £1,150; good prices; small goodwill and valuation.

LONDON, N.W. (best part, residential).—Excellent position; neglected Dispensing and good-class Retail, returning £750; owner must sell, and will accept £250.

LONDON, N.—Central position, populous neighbourhood; Cash Retail; returns £680; no Dentistry, Photo, or Optics; rent £45, on lease; corner shop; can be largely increased; price £250; recommended.

NAVAL, Commercial and Pleasure (South Coast).—Large town; central position; old-established; good shop; large house; returns £1,400, good prices; rent £110; can let off half without inconvenience; price £1,000 or valuation terms.

## W. J. ROGERSON,

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### Valuations for Transfer of Business, Probate, Stocktaking, &c.

Terms reasonable. Distance no object.

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*Chemists' Valuers and Transfer Agents,*

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TELEPHONE: 1809 CENTRAL.

Have the following Businesses for Disposal. (No charge to Purchasers.)

1.—FASHIONABLE Inland Health Resort (South).—Good-class Retail and Dispensing Business; returns under manager £2,250; net profit about £650; very handsome Pharmacy; heavily stocked; applicants with £2,000 can have further particulars; references required.

2.—SOUTH COAST.—High-class Dispensing and Retail Business; neglected through ill-health; returns £1,100; excellent prices; plenty of scope for increase; best position in the town; owner retiring; price £950.

3.—BERKSHIRE.—Good-class Retail and Dispensing, with Photographic trade; returns about £850; net profit £225; good position; large house and garden; price £575, or valuation.

4.—GLOS. (Market Town).—Good-class Business with valuable Proprietaries; returns £750 to £800, increasing; large shop, in first-rate position; heavily stocked; good house; price £650.

5.—OXFORDSHIRE.—Good-class Retail Business; pleasantly situated in growing district; returns £560, increasing; net profit £200; modern-fitted shop; well stocked; price £520; worth attention.

6.—LONDON, S.W. (Main Road).—Fine corner position; Cash Retail, Dispensing, and Prescribing Business; returns over £2,000 under manager; principal could do £60 weekly; price £900, or valuation; no goodwill required.

7.—LONDON, N. (Marketing position).—Good corner shop; returns £7 to £8 weekly; younger man could do £14; profits half; good house; price £135, bargain; well fitted and stocked.

### STOCKTAKING VALUATIONS.

Messrs. BERDOE & FISH make a special feature of, and special terms for, periodical valuations for stocktaking purposes. We value the stock in full detail without disturbing the routine of the business in the slightest degree; in fact, when we finish you do not know we have been. The advantages of stocktaking are: (1) You know your exact profit for income-tax and other purposes; (2) If you are overstocked, you know where, because we tell you; (3) You know whether you are fully insured against fire, and if you should have a fire, the production of our books would soon settle your claim without any loss; (4) If you wanted to sell your business you would do so twice as quickly if you had stock taken; (5) Our charges for doing the work are much lower than for ordinary valuations, and we shall have much pleasure in forwarding them on application.

J. G. BERDOE established the firm in 1870, and W. S. FISH was apprenticed to him in 1877.

8.—HAMPSHIRE.—Light Retail, Dispensing, and Prescribing Business; established many years; returns nearly £1,350; net profit £450 to £500; very best position; no keen competition; good reason for selling; price £1,275.

9.—NORTH WALES (Health Resort).—Good-class Retail and Dispensing Business, with own Specialities; returns £945; net profit £260; splendid position; low rent; convenient house; price £650.

10.—LANCS (Seaside Resort).—High-class Retail and Dispensing Business, in prominent position and showing steady increase; returns about £900; good profits; price £550, or valuation; good introduction.

11.—SOUTH WALES.—General Light Retail and Prescribing Business; in best position; growing district; no opposition; returns £600 to £650; plenty of scope; price £450; £250 can remain.

12.—LIVERPOOL.—Profitable Light Retail and Prescribing Business; returns £12 weekly, entirely under manager; low rent; corner shop; well fitted and stocked; price £275, or near offer.

13.—LONDON, N.—Light Suburban Retail, Dispensing, and Prescribing; returns £950; net profit £345 clear; good position; well stocked; must sell on account of illness; price £625.

14.—OXFORD STREET (few doors from).—Profitable Retail, Dispensing, and Prescribing Business; present returns about £350; can be much increased; net profit £180; lock-up shop; price £230.

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IS THAT THE  
CHEMISTS EMULSION stands PRE-EMINENT.

 READ what your brethren say about it. 

WICK, March, 1909.  
GENTLEMEN.—Please forward Chemists Emulsion as per order herewith. Cheque enclosed. Am quite sold out. My customers are very pleased with it. Yours truly, (Signed)

CO. DURHAM, April, 1909.

GENTLEMEN.—Please quote best terms for Chemists Emulsion. I had a stock when taking over this business recently; but the demand is so good I want some more at once.

Yours truly, (Signed)

CARDIFF.  
Cheque enclosed. Have made a very fine window display, and have sold several.

Yours—

DORSET.  
Very pleased with Emulsions. Have already sold several bottles of both sorts (Petroleum and Cod Liver Oil), all sizes. Your dummies make a fine Window Show. I hope to get through a lot this season.

Yours—

THORNTON ON TEES.  
DEAR SIRS.—Please find cheque value £7. As. Having now tried the Chemist's Emulsion for the last three months. I must say I am delighted with the results, am showing again and it is selling well. This is my third lot, and shall soon be ready for more.

Yours faithfully, (Signed)

ISLE OF MAN.  
GENTLEMEN.—Please find cheque enclosed in settlement of account. Kindly repeat my last order. I have pushed the Chemists Emulsion and with success. My customers express perfect satisfaction. I trust the sales may continue to increase to our mutual benefit.

Yours faithfully, (Signed)

BIRMINGHAM.  
GENTLEMEN.—Your Emulsion is about the best I have experienced.

Yours truly, (Signed)

EYEMOUTH.  
GENTLEMEN.—I shall be obliged if you will send me Emulsion same as last, which gives entire satisfaction.

Yours faithfully, (Signed)

PORTSEA.  
GENTLEMEN.—In reply to yours, please send me two doz. 4/6 size Chemists Emulsion. I am pleased to say I am doing very well considering that I have never pushed an Emulsion.

Yours truly, (Signed)

ASHFORD DE LA ZOUCH.  
GENTLEMEN.—Please send me the remaining portion of Chemists Emulsion ordered. I find it is appreciated by my clients. I keep several of the display goods prominently in the window and certainly have sold more Emulsion this season than heretofore.

Yours faithfully, (Signed)

BIRMINGHAM.  
GENTLEMEN.—I beg to enclose cheque for my account. Am very pleased with the Emulsion.

Yours truly, (Signed)

ALL THE ORIGINALS ARE OPEN FOR INSPECTION AT OUR OFFICE.

In addition to the **Chemists Emulsion**, we have now placed upon the market a number of new original and high-class designs suitable for those Pharmacists who desire a first-class emulsion to sell under their OWN NAME.

EXCLUSIVE STYLES arranged to meet individual requirements as follows:

**FISHERMAN BRAND** Carton, in panel Bottles.

**"TWIN FISH"** " " } 6 oz. { Leather Capped Oval Bottles.

**"LEAPING FISH"** " " } 12 oz. & 24 oz. " " "

**"BABY BRAND"** Carton, in White Glass Panelled Bottles.

SAMPLES AND QUOTATIONS ON APPLICATION TO

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P.S.—We have appointed as Sole London Wholesale Agents Messrs. Sargers, 258 Euston Road, London, N.W., who hold stocks of all the various styles and will print customers' names, &c., on labels and cartons by arrangement. We trust our London clients will find our new arrangement a great convenience.

**"Food and Drugs Act."**

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The Great Importance of the following points will appeal to all Chemists :

- I. That the Quality of Drugs, Chemicals, and Galenicals should be of the very best.
- II. That Guarantees of Purity should be required from the Wholesale Houses.
- III. That the Wholesale Houses should be those of standing, whose Guarantees are responsible, and whose identity is known.
- IV. That the Guarantee should be of sufficient scope to afford full protection.

We have issued the following Guarantee for many years, and shall be glad to apply it to the invoices of any of our customers who may desire it :

*We guarantee all B.P. articles charged in this invoice to conform to the standard of the British Pharmacopœia, 1898, unless otherwise mentioned; and that all other articles are genuine as described.*

Date .....

(Signed) RAIMES & CO.



We should esteem the opportunity of meeting, quality for quality,  
any prices for Drugs and Chemicals advertised to the Trade,  
under equal conditions.

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B. & S. BRAND.

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→ SULPHATE OF QUININE AND ALL CINCHONA PREPARATIONS. ←

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**THE ORIGINAL PREPARATION.**

Many pharmacists have assured us that even when the name "HEWLETT'S" is not appended to the above title they invariably dispense HEWLETT'S preparation, as they know from experience that it is the best, that it keeps indefinitely, and universally gives satisfaction, whilst imitation preparations vary so considerably, not only from the original, but from each other, that patients notice the difference and complain.

Price 11s. per lb., packed, for dispensing only, in 10, 22, 40, and 90 oz. Bottles.

INTRODUCED AND PREPARED ONLY BY

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# RESINOL,

A PERFECT OINTMENT THAT IS THOROUGHLY EFFICIENT AS AN  
ANTIPRURITIC, ANTISEPTIC, LOCAL ANTIHLOGISTIC and SKIN NUTRIENT,

And is now being successfully used and prescribed by over

**100,000 PHYSICIANS**

In the United States, Canada, and Great Britain,

For Eczema, Erysipelas, Pruritus, and all Itching and Inflammatory Skin Diseases.

THE ONLY POSITIVE REMEDY FOR PRURITUS ANI KNOWN.

## RESINOL SOAP

ABSOLUTELY PURE and SCIENTIFICALLY MEDICATED.

The Best Soap for the Skin, the Hair, Scalp, &c. Promptly removes odours from handling Chemicals, Wounds, &c. Also a superior Shaving Soap.

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**Chloroform (Duncan).** Manufactured from PURE BRITISH ALCOHOL

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**Chloryl Anæsthetic (Duncan).** Syn. for Duncan's ABSOLUTE ETHYL CHLORIDE.

**ALL THE ABOVE ARE British Products GUARANTEED TO BE**  
**ABSOLUTELY PURE**  
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Our MEDICINAL OIL is specially recommended. Being a Pure Sweet Natural Oil, it is practically Tasteless.

NO ARTIFICIAL BLEACHING; THEREFORE NO RANCIDITY.

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The great household Remedy for Chest Colds, Sore Throat, Rheumatism, Sciatica, & all aches & pains.

"A positive pain killer."—DR. GORDON STABLES, R.N.

Advertised Prices ...  $1\frac{1}{2}$  and  $2/9$  per bottle.

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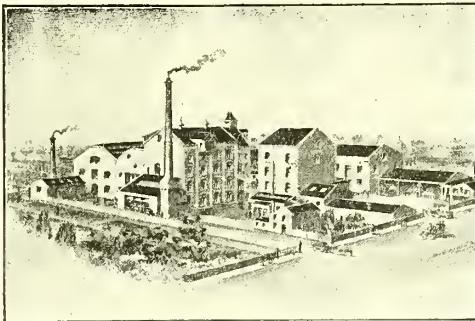


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**FOR HOME & EXPORT TRADE.**

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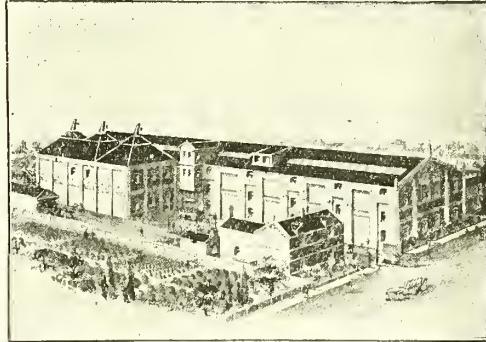
*the result being 158° Lintner, or 2048° by the Pharmaceutical Codex Method.*

We guarantee 100° Lintner minimum of this brand of Malt Extract. Higher strengths if required, also cheaper grades.

Send us your enquiries or ask our representative to call on you.

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Maltsters & Malt Extract Manufacturers,  
ST. NEOTS, HUNTINGDONSHIRE.



Wires:  
"POEM  
HULL."

**PREMIER  
CASTOR  
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PACKAGES.**

*Manufactured by  
PREMIER OIL  
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## CONGREVE'S Balsamic ELIXIR

*Is the oldest, most reliable and best remedy for*

## CONSUMPTION,

Also for ASTHMA, BRONCHITIS, COUGHS, COLDS,

AND ALL AFFECTIONS OF THE LUNGS,

1s. 1½d., 2s. 9d., 4s. 6d. and 11s. Bottles.

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LIMITED,

LONDON,

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Cables: "CALISAYIN LONDON."

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## CHEMICAL FOOD.

(QUALITY IS OUR SLOGAN.)

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Made with Pure Phosphoric Acid and Cane Sugar.

In W. Qts., Stone Jars, Carboys, or Casks, and in  $\frac{1}{4}$  lb.,  $\frac{1}{2}$  lb., and 1 lb. Amber Flats, in high-class style bearing own name.

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SPECIAL PRICES FOR QUANTITY.

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Telephone No. 1315 HOLBORN.

ESTABLISHED 1776.

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**Mrs. WINSLOW'S SOOTHING SYRUP**  
**FOR CHILDREN TEETHING.**

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GOLD MEDAL, ST. LOUIS, 1904.

**THOMAS TYRER & CO. Ltd.**

(THOMAS TYRER, F.I.C., F.C.S., Managing Director).

1844 — STRATFORD, LONDON — 1909

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PHARMACEUTICAL **Chemicals** INDUSTRIAL  
INFERIOR TO NONE**Ethers—hypophosphites.**

ACETONE	ACID ACETIC	CARBON
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"	OLEIC	PHOSPHIDES
"	PHOSPHORIC	PHOSPHATES
"	TANNIC	POTASSIUM SALTS
AMYL ACETATE	ANTIMONY SALTS	SICCATIVES
BARIUM SALTS	BISMUTH SALTS	SODIUM SALTS
BROMIDES	CITRATES	SULPHITES
ZINC SALTS		THORIUM SALTS
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**Collodions—Pyrorylins.****BISMUTHS & MERCURIALS.****BUYERS' GUIDE**

pages 7 to 11

You get 20% or 25% Profit when you sell

**CURRY'S Home Remedies.**

CURRY'S Ointment

CURRY'S Herbal Pills.

CURRY'S Tonic Digestive Tablets.

Above Prices are for orders, one Dozen and over. Odd lots under one Dozen at 10s. Dozen rate. All carriage paid. Show Cards and Counter Bills supplied free.

CASH WITH ORDER.

Face Min. Retail Min. Whole-

Value. Price. sale Price.

1/- 1/- 9/- per doz.

MIXED ORDERS SENT.

HENRY CURRY, 14 Scarborough St., WEST HARTLEPOOL.

**"THE LANCET."**

JULY 31st, 1909.

**DiMalt Malt Extract with Cod Liver Oil.**

(The BRITISH DIAMALT CO., 11 &amp; 13 Southwark Street, London, S.E.)

We have already remarked upon the high diastatic value of this company's malt extract. According to our experiments, DiaMalt digests nearly seven times its weight of starch at body temperature and as much as 13 times its weight of starch at higher temperatures.

It is therefore not surprising that DiaMalt blends perfectly with a high percentage of cod liver oil. Samples recently submitted to us yielded respectively 17.00 and 33.73 per cent. by weight of cod liver oil. The excellence of the malt extract adds not a little to the palatability of the compound in spite of the oil. Altogether these preparations may be regarded as the standard of a malt and cod liver oil combination.

# Dr. J. Collis Browne's CHLORODYNE

- - - AND THE - - -

## New Poisons & Pharmacy Bill

---

**I**N reply to enquiries, we beg to state that Chemists should not request purchasers to sign a Poison Book, seeing that this medicine **does not** come within Part I of the Poisons Schedule.

---

**J. T. DAVENPORT, LTD.**  
PROPRIETORS  
**117 Union Street, London, S.E.**

## PRICES ISSUED WEEKLY.

Original Packages can generally be supplied at the Current Prices quoted in the Trade Report of this paper on Terms as below.

- \*Acet. Ipecac, B.P., 7 lbs. @ 1/3 lb.
- " Scilla, B.P., 7 lbs. @ 3d. lb.
- \*Acetone, 6 lbs. @ 1/2 lb.; 1 lb. @ 1/4 lb.
- \*Acid Acet. Glacial, 99%, Carboys 144 lbs. @ 4d. lb.; 12 6-lb. bts. @ 6½ d. lb.; 6 lbs. @ 8d.
- Acid Acetoxy-Salicyl, 56 lbs. @ 2/1 lb.; 7 lbs. @ 2/3 lb.; 1 lb. @ 2/5 lb.
- " Benz.B.P., 7 lbs. @ 1/8 lb.; 1 lb. @ 2/- lb.
- " Boric Pnly., 3 cwt. @ 28/- owt.; 1 cwt. @ 28/6 cwt.; levigd. 3/- cwt. extra.
- \*Carboi Xitis, 39/40%; 56 lbs. @ 5d. lb.; 10-lb. Tins @ 5/8 each; Detached Cryst. 8/- each; 36 1-lb. Bots. @ 9d. lb., Single Bots. 11d. lb.; Detached Cryst. 1 lb. @ 1/1 lb.; Ornde Black, 45 Gall. Casks @ 10d. gall.; 1 Gall. Tins @ 1/6 each.
- \*Citric Cryst., B.P. 85, 1 cwt. @ 4/1 lb.; 7 lbs. in Bags @ 1/5 lb.; powder 4d. lb. extra.
- Dithethylbarbituric, 16 oz. @ 38/6 lbs.; 1 oz. @ 2/8 oz.
- " Gallic pur. P.B., 7 lbs. @ 1/10 lb.; 1 lb. @ 2/- lb.
- \*Hydrobrom., dil., B.P., 6 lbs. @ 7d. lb.
- \*Hydrocyan, P.B., 6 lbs. @ 1/1 lb.; 1 lb. @ 1/4 lb.; 36 1-oz. Vials @ 3/6 doz.
- \*Oxalic Cryst., 5 cwt. @ 3d. lb.; 1 cwt. @ 3d. lb.; 14 lbs. @ 4d. lb.
- " Phosph. Dil., B.P., 8 lbs. @ 4d. lb.
- " Salicyl. pulv., 1 cwt. @ 1/1 lb.; 28 lbs. @ 1/3 lb.; 7 lbs. @ 1/3 lbs.; phs. pure, 1 lb. @ 3/- lb.
- Sulphur. Coml. cases, 4 2-gal. jars, 17/- each; 20 cases @ 16/- each.
- " Sulph. Aromat., B.P., 5 lbs. @ 3/8 lb.
- " Tannic, B.P., 7 lbs. @ 2/2 lb.
- \*Ext. Hamamelis, Liq. P.B., 5 lbs. @ 3/5 lb.
- " Hyoscyam., Solid, B.P., 3 lbs. @ 6/- lb.; 1 lb. @ 6/3 lb.
- \*Ext. Ipecac. Liq. P.B., 5 lbs. @ 11/- lb.; 1 lb. @ 11/9 lb.
- Malti c. Ol. Jecoris, 10 lbs. @ 5½ d. lb.
- " Hyoscyam., Solid, B.P., 3 lbs. @ 6/- lb.; 1 lb. @ 3/6 lb.; solid 4d. lb. extra.
- Ferri Ammon. Cit., B.P., 28 lbs. @ 1/4½ lb.; 7 lbs. @ 1/7 lb.
- Ferri Carb. 1 cwt. @ 21/- cwt.; 28 lbs. @ 3d. lb.
- Ferri Et Quinina Cit., P.B.; 50d. ozs. @ 3d. oz.; 100 ozs. @ 3d. oz.; 25 ozs. @ 3d. oz.
- Ferri Sulph., pure cryst., 1 cwt. @ 15/-; 7 lbs. @ 2d. lb.
- Ferrum Redact. 80%, 28 lbs. @ 1/1 lb.; 7 lbs. @ Fol. Buchu, round good green, 7 lbs. @ 1/10 lb.
- Fol. Hyoscyam. Bioe., 7 lbs. @ 6/- lb.
- Fol. Sennae Alex. parv. 1 cwt. @ 4d. lb.; 28 lbs. @ 4/4 lb.
- Fol. Sennae Tunney. 3½ cwt. @ 2d. lb.; 1 cwt. @ 3½ lb.; 7 lbs. @ 3½ d. lb.; English Ground, 1 cwt. @ 5½ d. lb.; 56 lbs. @ 6d. lb.; 7 lbs. @ 7d. lb.
- Formaldehyde, 40%, 132-lb. Carboys @ 52/- each; 7 lbs. @ 7d. lb.
- Gamboge English Ground, 7 lbs. @ 4/- lb.; 1 lb. @ 4/4 lb.
- Gingerine, Extra, 5 lbs. @ 9/8 lb.; 1 lb. @ 10/- lb.
- Honey, fine White Set, 28 lbs. @ 47/- owt.
- Lin. Camph. P.B., 40 lbs. @ 10½ d. lb.; 9 lbs. @ 11d. lb.
- Lin. Sapo Meth., 9 lbs. @ 7d. lb.
- Lin. Tereb. Acet., B.P., 9 lbs. @ 1/- lb.
- \*Liq. Ammonii/acetatis Conco. 1-7, 6 lbs. @ 10½ d. lb.; 1 lb. @ 10½ d. lb.
- \*Sp. Ammon. Aromat. P.B., 5 lbs. @ 2/8½ lb.
- \*Spt. Chloroformi, P.B., 5 lbs. @ 3/7 lb.
- Stroutte Bromid., 1 cwt. @ 1/2½ lb.; 7 lbs. @ 1/4½ lb.; 1 lb. @ 1/6 lb.
- Sugar of Milk, B.P., 1 cwt. @ 44/- cwt.; 7 lbs. @ 6d. lb.
- \*Syr. Anrant, P.B., 7 lbs. @ 8d. lb.
- \*Syr. Easton, B.P., 7 lbs. @ 1/- lb.
- " Ferri Iodid. P.B., 7 lbs. @ 1/1 lb.
- " Ferri Phosphat. Co., 7 lbs. @ 5d. lb.
- " Hypophosph. Co. B.P.C., 7 lbs. @ 2d. lb.
- " Prun. Virg. B.P., 8 lbs. @ 7d. lb.
- " Rhamni, 7 lbs. @ 10d. lb.
- Rhei P.B., 7 lbs. @ 7d. lb.
- " Scilla P.B., 7 lbs. @ 4d. ib.
- " Senna P.B., 7 lbs. @ 8d. lb.
- " Tolut. P.B., 7 lbs. @ 7d. lb.
- \*Tinct. Aurantii Recens, B.P., 5 lbs. @ 3/6 lb.
- \*Tinct. Belladon., B.P., 5 lbs. @ 2/11 lb.
- \*Tinct. Benzoini Comp., P.B., 5 lbs. @ 3/5 lb.
- \*Tinct. Camph. Comp., P.B., 5 lbs. @ 2/5 lb.
- \*Tinct. Cantharidis, P.B., 5 lbs. @ 3/9 lb.; bond, 6d. lb.
- \*Tinct. Capsic', B.P., 5 lbs. @ 3/3 lb.
- \*Tinct. Card. Comp., P.B., 5 lbs. @ 2/6 lb.; bond, 6d. l.
- \*Tinct. Catechu, P.B., 5 lbs. @ 2 8 lb.; bond, 7d. lb.
- \*Tinct. Chlorof. o. Morph. Comp., B.F., 1885, 5 lbs. @ 1/11 lb.; bond, 1/5½ lb.
- \*Tinct. Cinchon. Comp., B.P., 5 lbs. @ 3/4 lb.; bond, 10d. lb.
- \*Tinct. Cinchon. Rub., P.B., 5 lbs. @ 3/- lb.; bond, 10d. lb.
- \*Tinct. Digitalis, B.P., 5 lbs. @ 2/8 lb.; bond, 5½ d. lb.

## QUALITY. DISPATCH. PRICE.

- Acid Tart., cryst. or pulv., B.P. 1885, 1 cwt. @ 10d. lb.; 7 lbs. @ 11½ d. lb.; parv. 4d. lb. extra.
- Adeps Lanæ B.P., Anhydrous, 2 cwt. @ 52/6 cwt., Hydro. @ 49/- cwt.; 1 cwt. @ 2/- cwt., 28 lbs. @ 6/- cwt., 14 lbs. @ 8/- cwt., 7 lbs. @ 12/- cwt. extra.
- Aloes Barb., English Ground, 28 lbs. @ 70/- cwt.; 7 lbs. @ 8d. lb.
- Aloes, Socot., 7 lbs. @ 1/5 lb.; powder, 7 lbs. @ 1/5 lb.
- Ærugo Aris Pulv., 14 lbs. @ 11d. lb.
- Aloin, B.P., 1 lb. @ 3/3 lb.
- Ammon. Benz., 7 lbs. @ 2/8 lb.; 1 lb. @ 3/- lb.
- Bismuth. P.B. Carb., 14 lbs. @ 7/8 lb.; 3 lbs. @ 8½ lb.; subnit., 1/- lb. less.
- Camphor, English Flowers, "not artificial," 5 lbs. @ 1/11 lb.; ½ oz. 7 lbs. @ 2½ lb.; ½ oz. 7 lbs. @ 2/4 lb.; Crude, 140 lbs. @ 1/4½ lb.; 1 lb. : 28 lbs. at 1/6 lb.
- Cream Tartar, 98% powder, 1 cwt. @ 72/6 cwt.; 7 lbs. @ 8d. lb.
- Ess. Lemon, 12 Copper @ 3/6 lb.; 6 1-lb. hots. @ 4/0 lb.; not guaranteed absolutely pure.
- Ess. Pear (artificial), Jargonelle, 5 lbs. @ 1/6 lb.; Bergamot, 2/6 lb.
- Ess. Pineapple, 5 lbs. @ 3/4 lb.
- " Vanilla Beans, 5 lbs. @ 4/4 lb.; 1 lb. @ 4/7 lb.
- \*Ext. Belladonna Liq. B.P., 5 lbs. @ 4/7 lb.; 1 lb. @ 5/- lb.
- Ext. Casearia Sag. Liq., B.P., 10 lbs. @ 1/2 lb.
- \*Ext. Ergot. Liq. P.B., 5 lbs. @ 3/1 lb.; 1 lb. @ 3/4 lb.
- Ext. Filicis Liq., P.B., 9 lbs. @ 4/2 lb.; 1 lb. @ 4/8 lb.
- Ext. Gent., P.B., Solid, 1 cwt. @ 8½ d. lb.; 7 lbs. @ 9½ d. lb.
- " Glycyrrh. Liq. B.P., 6 lbs. @ 1/6 lb.

\*Minimum quantity at these prices, Home Trade, 8 Winchester Quarts assorted. Export, 12 Winchester Quarts assorted.

NOTE.—Only Terms Net Cash with order without discount, or orders accepted through London Merchants or Bankers.  
Goods carriage forward; all packages free; Export cases extra.

**ALLIANCE DRUG & CHEMICAL CO., LONDON.**  
Office: 34 LEADENHALL STREET.

**KINDLY DETACH THIS SHEET AND PLACE IT IN YOUR BUYING BOOK.**

- Liq. Ammon. Aromat., 6 lbs. @ 9d. lb.
- " Antim. Ochl. Pure, 8 lbs. @ 6½ d. lb.
- " Arsenicals, P.B., 7 lbs. @ 4d. lb.; 1 lb. @ 7d. lb.
- " Arsenic Hydrochlor., 7 lbs. @ 4d. lb.; 1 lb. @ 7d. lb.
- " Bismuth. P.B., 6 lbs. @ 10½ d. lb.
- " Copoiba Bucha et Cubeb, 5 lbs. @ 2/6 lb.; 1 lb. @ 2/10 lb.
- " Easton, p.s. 1-3, B.P., 1 lb. @ 3/- lb.
- " Ferri Dialysatis, 6 lbs. @ 7d. lb.
- Liq. Ferri Iod. p.s. 1-7, 1 lb. @ 5½ lb.
- Morphinæ Acet. Hydrochlor. or Sulph., Pnly., B.P., 25 oz. @ 6/2 oz.; 16 oz. @ 6/3 oz.; 8 oz. @ 6½ oz.; 1 oz. @ 6/9 oz.; Pur. Præcip., Bimeconite or Tart., 1 oz. @ 8/3 oz.
- Opium Thrc, B.P., 14 lbs. @ 13 - 1 lb.; 3 lbs. @ 13 6 lb.; 1 lb. @ 14½ lb.; powder, 6d. lb. extra.
- Oil. Olivæ, P.B. Flav., 45 galls. @ 4/3 gall.; 2 galls. @ 5/3 gall.
- Sapo Cast. Alb., 10 cwt. @ 23/- cwt.; 2 cwt. @ 24/- cwt.; 7 lbs. @ 3½ d. lb.; Mottled, 2 cwt. @ 27/6 cwt.; 1 cwt. @ 2½/6 cwt.; 7 lbs. @ 4d. lb.
- Shellac (Orange), 1½ cwt. @ 76/- owt.; 7 lbs. @ 10d. lb.
- Soda Canistica, 28-lb. tin @ 8½ d. lb.; 6 1-lb. Bots. @ 10d. lb.
- Sodi Bromid. P.B., 1 cwt. @ 10½ d. lb.; 7 lbs. @ 12½ lb.
- Soda Cit., B.P., 3 lbs. @ 1/10 lb.
- Sodi Hyposulphite, pea cryst., 1 cwt. @ 8/6 cwt.
- Soda Salicyl. Pulv., 1 cwt. @ 1½ lb.; 28 lbs. @ 1/6 lb.; 7 lbs. @ 1/7 lb.; pbys. pur. 28 lbs. @ 2½ lb.; 1 lb. @ 2½ lb.
- Soda Sulphocarbolas B.P., 7 lbs. @ 10½ d. lb.; 1 lb. @ 1½ lb.
- \*Spt. Ether Nit. P.B., 4½ lbs. @ 3½ lb.; 1 lb. @ 3½ lb.
- \*Tinct. Gelsem., B.P., 5 lbs. @ 2/10 lb.
- \*Tinct. Gentianæ Comp., B.P., 5 lbs. @ 1/1½ lb.; bond, 6d. lb.
- \*Tinct. Hyoscyami, B.P., 5 lbs. @ 2/10½ lb.; bond, 6d. lb.
- \*Tinct. Iodi B P., 5 lbs. @ 3 11 1 . ; bond, 1/1½ lb.; deco our, 5 lbs. @ 4/3 lb.
- \*Tinct. Lavandula Comp., B.P., 5 lbs. @ 3/10 lb.; bond, 6d. lb.
- \*Tinct. Myrrhæ, B.P., 5 lbs. @ 3/9 lb.; bond, 9d. lb.
- \*Tinct. Nncis Vom., B.P., 5 lbs. @ 2/10 lb.; bond, 5½ d. lb.
- \*Tinct. Opif. B.P., 5 lbs. @ 3/- lb.; bond, 1/11 lb.
- \*Tinct. Opif. Amon., B.P., 5 lbs. @ 3/4 lb.
- \*Tinct. Opif. Aquos., 5 lbs. @ 1 8 lb.
- \*Tinct. Quinæ Amm., B.P., 5 lbs. @ 2/6 lb.; bond, 1½ lb.
- \*Tinct. Rheo Co., B.P., 5 lbs. @ 2/2 lb.; bond, 8d. lb.
- \*Tinct. Scilla, B.P. 5 lbs. @ 2 6 lb.
- \*Tinct. Senegæ, P.B., 5 lbs. @ 3/1 lb.; bond, 1½ lb.
- \*Tinct. Strobænæ, P.B., 5 lbs. @ 3/5 lb.; bond, 8d. lb.
- \*Tinct. Valeriana, 5 lbs. @ 2/8 lb.; bond, 6d. lb.
- \*Tinct. Valeriana Ammon., P.B., 5 lbs. @ 3/1 lb.; bond, 8d. lb.
- \*Tinct. Zingib., P.B., 5 lbs. @ 4/- lb.; bond, 6½ lb.
- \*Tinct. Zingib. Fortior, 5 lbs. @ 4/3 lb.; bond, 10½ d. lb.
- Treacle (Black), 5½ owt. @ 7/6 cwt.; 24 lbs. @ 2d. lb.
- Ung. Acid. Boric, P.B., 28 lbs. @ 6½ d. lb.; Flav. 28 lbs. @ 4½ d. lb.
- " Acid. Carbol. B.P., 28 lbs. @ 8d. lb.; 7 lbs. @ 9d. lb.; 1 lb. @ 1½ lb.
- " Galas P.B., 7 lbs. @ 10d. lb.; 1 lb. @ 11d. lb.
- " Opio, 7 lbs. @ 2½ lb.

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### HIMROD'S Cure for Asthma

Our New Style Package appears soon and every dealer should be ready to meet the demand for it.

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A Medicine of high repute, enjoying a large and steadily increasing sale, which is supported by a consistent advertising policy.

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IMPORTERS OF  
CHEMICALS, DRUGS, AND  
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MUROMACHI 3-CHOME, TOKYO, JAPAN.

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May now be had in £5 Lots, at Lowest Prices, Carriage Paid. Packages Free.

**ORDERS** must be accompanied by Cash. Cheques to be made payable to Thomas Beecham, and crossed "Parr's Bank, Limited, St. Helens."

	PER DOZEN.
<b>PRICES.</b> —Beecham's Pills, 13½d. size (56 pills) ....	9/6
,, 2s. 9d. „ (168 „ ) ....	25/-
Beecham's Tooth Paste, 1s. size ....	7/6

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. . THE . .

# CHEMIST'S CO-OPERATIVE WHOLESALE.

Iodoform Cryst., Pulv. or Praecip. 7 lbs. @ 12/- lb.; 3 lbs. @ 12 3/-; 1 lb. @ 12/6.  
 Iodum Resub. B.P. 7 lbs. @ 10/- lb.; 1 lb. @ 10/6.  
 Jalapæ Resina B.P. Pulv. 1 lb. @ 22/-.  
 Lin. Aconiti Meth. 6 lbs. @ 10d. lb.  
     " Album. 6 lbs. @ 5d. lb.  
     " Belladon. Meth. 6 lbs. @ 1/2 lb.  
     " Camph. Ammon. Meth. 6 lbs. @ 11d. lb.  
     "     " B.P. 40 lbs. @ 11d. lb.; 9 lbs. @ 1/-.  
     " Saponis Meth., 6 lbs. @ 6½d. lb.  
 Lint, Surgeons'. 1 cwt. @ 1/1 lb.; 7 lbs. @ 1/2.  
 Liq. Ammon. Acet. Conc., 1-7. 6 lbs. @ 9d. lb.  
     " Aromat. 1-7. 6 lbs. @ 9d. lb.  
     " Arsenicalis B.P. 7 lbs. @ 4d. lb.; 1 lb. @ 7d.  
     " Arsenii Hydrochlor. B.P. 7 lbs. @ 4d. lb.; 1 lb. @ 7d.  
     " Bismuthi B.P. 6 lbs. @ 10½d. lb.  
     " Copaibæ Co. 5 lbs. @ 2/- lb.  
     " Eastoni pro Syr., 1-3. 1 lb. @ 2/9 lb.  
     " Ferri Iodid. pro Syr., 1-7. 1 lb. @ 5/6 lb.  
     " Iodi Fort. B.P. 5 lbs. @ 4 6 lb.  
     " Morph. Acet. B.P. 6 lbs. @ 2/- lb.  
         " Hydrochlor. B.P. 6 lbs. @ 2/- lb.  
     " Opii Sedativus. 1 lb. @ 3/9 lb.  
     " Papaveris Alb. pro Syr., 1-7. 6 lbs. @ 2/- lb.  
     " Rhamni pro Syr., 1-7. 6 lbs. @ 3/9 lb.  
     " Rhæi pro Syr., 1-7. 6 lbs. @ 1 8 lb.  
     " Rhæados pro Syr., 1-7. 6 lbs. @ 1/11  
     " Santal Co. 6 lbs. @ 3/- lb.  
     " Sennæ pro Syr., 1-3. 6 lbs. @ 1/6 lb.  
     " Strychnin. Hydrochlor. B.P. 6 lbs. @ 1/3 lb.  
     " Tolut. pro Syr. 1-7. 6 lbs. @ 1/3 lb.  
     " Violæ pro Syr. 1-15. 1 lb. @ 2/3 lb.  
 Magnes. Sulph. Opt. B.P. 1 cwt. @ 5/9 cwt.  
 Mist. Sennæ Co. B.P. 6 lbs. @ 7½d. lb.  
 Morphinæ Acet. or Hydrochlor. Pulv. B.P. 25 ozs. @ 6 3/oz.; 8 ozs. @ 6 6/-; 1 oz. @ 6 8/-.  
 Naphthaline, Candle, Marble or Flake. 1 cwt. @ 11/- cwt.; 28 lbs. @ 13/- cwt.  
 Oleum Amygd. Dulc. Ang. B.P. 9 lbs. @ 2/5 lb.  
     " Persic. 56 lbs. @ 9½d. lb.; 9 lbs. @ 11½d.  
     " Anisi B.P. 1 lb. @ 5/6 lb. [3 6/-.  
     " Caryoph. Ang. B.P. 5 lbs. @ 3/2 lb.; 1 lb. @ 1/4 lb.  
     " Eucalypti B.P. 9 lbs. @ 1/4 lb.  
     " Juniper Bacc. B.P. 5 lbs. @ 3/3 lb.; 1 lb. @ 3 6.  
     "     " Ligni. 28 lbs. @ 1/4 lb.; 9 lbs. @ 1 5/6.  
     " Lavand. Gall. Opt. 5 lbs. @ 8/2 lb.; 1 lb. @ 8 6.  
     " Limonis (Absolutely Pure). 12 lbs. @ 4/- lb.; 1 lb. @ 4 6.  
     " Menth. Pip. Hotchkiss. 6 21-oz. Bots. @ 8/8 lb.; 1 21-oz. Bot. @ 9/2 lb.  
         " Wayne County. 9 lbs. @ 6/9;  
         " 1 lb. @ 7/- lb.  
     " Olivæ B.P. Sweet. 1 gln. @ 6/- gln.  
     " Origanum Rub. Com'l. 28 lbs. @ 1/5 lb.; 9 lbs. @ 1 7.  
     " Ricini Opt. Alb. 160 lbs. @ 32/6 cwt.; 80 lbs. @ 34/6 cwt.; 40 lbs. @ 35 6 cwt.  
     " Rosmarini B.P. 9 lbs. @ 2/7 lb.; 1 lb. @ 2 10.  
     " Santal. Flav. Ang. B.P. 5 lbs. @ 10/3 lb.; 1 lb. @ 10/6.  
 Opium Ture. (10½% Morphine). 7 lbs. @ 13 6 lb.; 1 lb. @ 14/-; Pulv. 6d. lb. extra.  
 Oxymel Scillæ B.P. 28 lbs. @ 4½d. lb.; 7 lbs. @ 5d.  
 Phenacetin B.P. 28 lbs. @ 2/6 lb.; 7 lbs. @ 2/7; 1 lb. @ 2/9.

Phenazonum B.P. 7 lbs. @ 6/9 lb.; 1 lb. @ 7/-.  
 Podophyllin Resin B.P. 7 lbs. @ 10/6 lb.; 1 lb. @ 10/9.  
 Potassa Caustica Stick B.P. 28 lbs. @ 9d. lb.; 7 1-lb. Bots. @ 10d.  
 Potass. Bicarb. B.P. Pulv. 1 cwt. @ 30/- cwt.; 7 lbs. @ 4d. lb.  
     " Bromid. B.P. 1 cwt. @ 10½d. lb.; 28 lbs. @ 11d.; 7 lbs. @ 1/-.  
     " Iodid. B.P. 1 cwt. @ 7/6 lb.; 14 lbs. @ 7/8; 3 lbs. @ 7/11; 1 lb. @ 8/2.  
     " Perman. Cryst. B.P. 1 cwt. @ 37/6 cwt.; 7 lbs. @ 5d.  
 Pulv. Glycyrrh. Co. B.P. 28 lbs. @ 30/- cwt.  
 Quinin. Sulph. B.P. 100 ozs. @ 6½d. oz.; 25 ozs. @ 7½d.; 10 ozs. @ 8d.  
 Rad. Jalapæ Pulv. B.P. 7 lbs. @ 2/- lb.; 1 lb. @ 2/2.  
 Santoninum B.P. 7 lbs. @ 14/- lb.; 1 lb. @ 14/6.  
 Soda Bicarb. Opt. (B. M. & Co.). 1 cwt. @ 6 6 cwt.  
     " Hyposulph. Pea Cryst. 1 cwt. @ 8/- cwt.  
 Spt. Ether. Nit. B.P. 5 lbs. @ 3/5 lb.  
     " Ammon. Aromat. B.P. 5 lbs. @ 2/9 lb.  
 Strychnin. Cryst. B.P. 25 ozs. @ 1/6½ oz.; 1 oz. @ 1/9.  
     " Hydroch. B.P. 25 ozs. @ 1/4½ d. oz.; 1 oz. @ 1/7.  
     " Nitrate. 25 ozs. @ 1/4½ oz.; 1 oz. @ 1/7.  
     " Sulphate. 25 ozs. @ 1/4½ oz.; 1 oz. @ 1/7.  
 Succus Belladon. B.P. 5 lbs. @ 1/6 lb.  
     " Conii B.P. 5 lbs. @ 1/4 lb.  
     " Digitalis. 5 lbs. @ 1/7 lb.  
     " Hyoscyami B.P. 5 lbs. @ 1/9 lb.  
     " Taraxaci B.P. 5 lbs. @ 1/4 lb.  
 Sulphonal B.P. 1 lb. @ 9/3 lb.  
 Sulphur Sublim. 1 cwt. @ 7/9 cwt.  
 Syrup. Aurant. B.P. 7 lbs. @ 8d. lb.  
     " Ferri Phosph. Co. 7 lbs. @ 4d. lb. [9d. lb.  
     "     " Quinin. et Strych. 7 lbs. @ 4d. lb.  
     "     " Iodid. B.P. 7 lbs. @ 1/- lb.  
     "     " Hypophosph. Co. B.P.C. 7 lbs. @ 7d. lb.  
     "     " Pruni Virg. B.P. 7 lbs. @ 8d. lb.  
     "     " Rhei B.P. 7 lbs. @ 6d. lb.  
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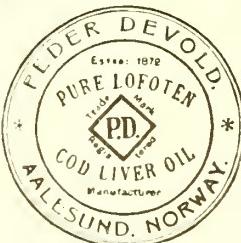
Silver Medal	<b>1886</b>	Liverpool
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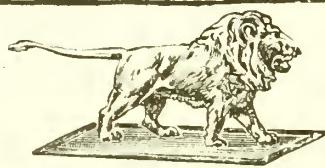
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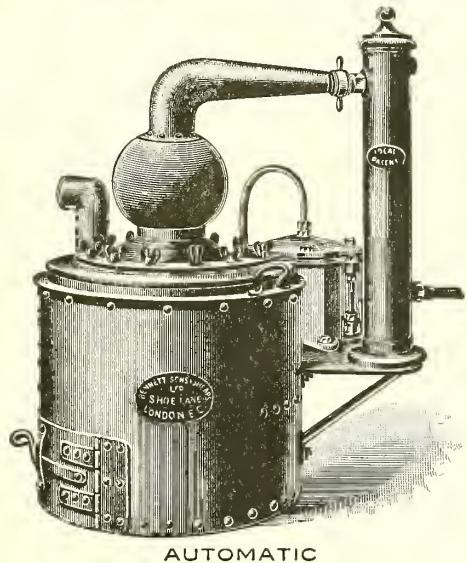
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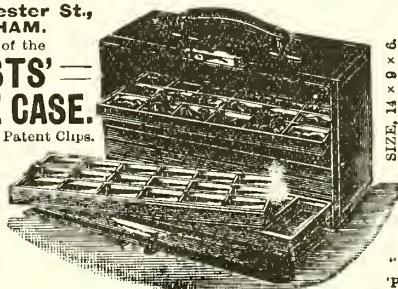
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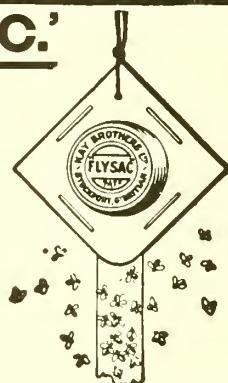
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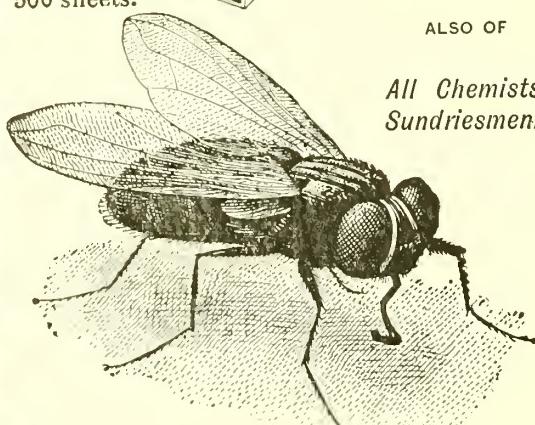
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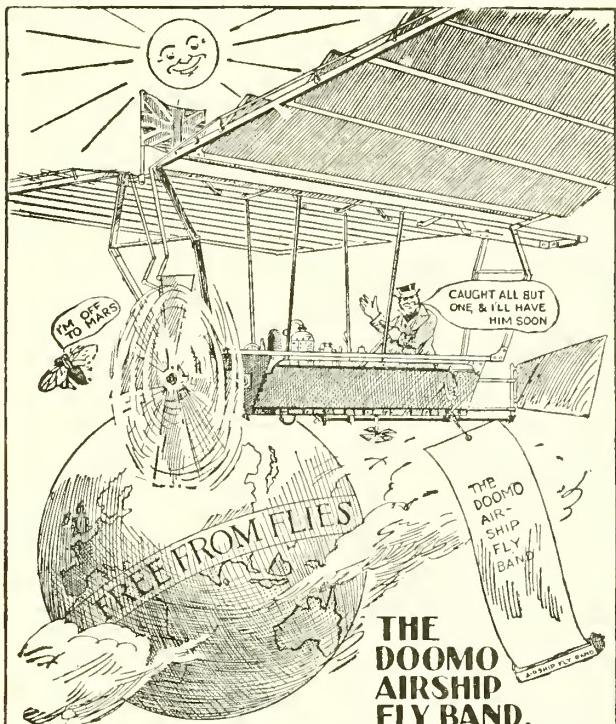
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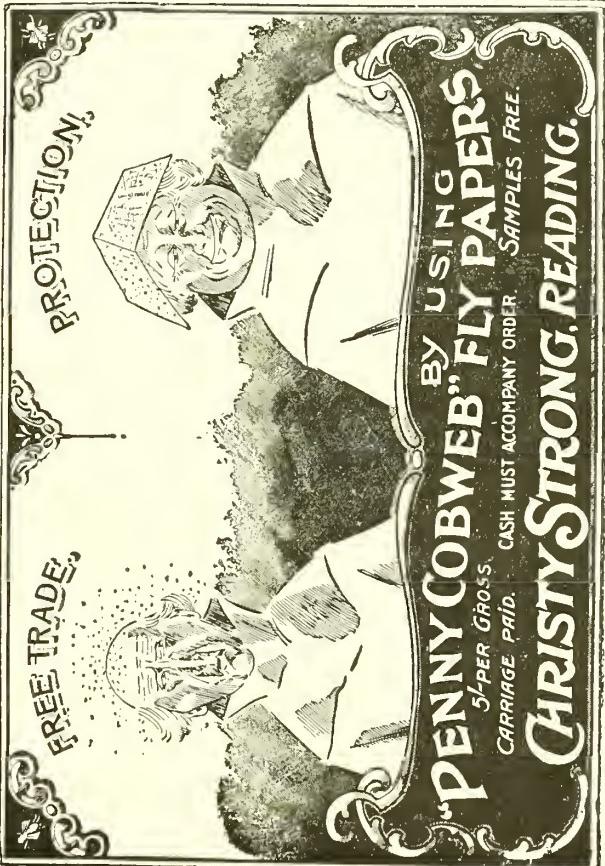
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**VICHY-ÉTAT COMPRIMÉS**

For instantaneously producing an  
effervescing alkaline water.

*Price Lists, Show Cards, Dummy Bottles, Pamphlets, &c.*

**CAUTION.**—Each Bottle from the STATE SPRINGS bears a neck label with the word "VICHY-ÉTAT" and the name of the SOLE AGENTS:—

**INGRAM & ROYLE, LTD., 26 UPPER THAMES STREET, E.C.** And at LIVERPOOL and BRISTOL.

## A. MILLAR & CO., LTD., DUBLIN PURE ORANGE WINE

(VINUM AURANTII, B.P.), prepared in strict accordance with the Formula of the British Pharmacopœia. (Wholesale only.)  
WRITE FOR SAMPLES TO 10, 11, and 12 THOMAS STREET, DUBLIN.

## SODAWATER MACHINERY

### THE "COMPACT" MACHINES

are specially designed for

CHEMISTS, GROCERS, RESTAURATEURS,

and everyone to whom space is an object,  
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Bottles, or Cork Bottles.

OCCUPY LITTLE SPACE!  
ARE READY FOR USE IMMEDIATELY!

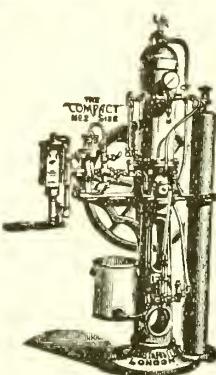
REQUIRE NO FIXING!

Produce Soda Water, Lemonade, &c., of the  
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*Write for Catalogue.*

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CAPABLE OF PRODUCING OVER  
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OF AERATED WATER PER DAY  
—from £20.

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Requisites for the Trade at  
Lowest Prices.

# IDRIS Table Waters

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## Chinaways.

The only syphon which fully ensures avoidance of the contents coming into contact with metal.

As supplied by  
Royal Warrant of  
Appointment to  
H.M. THE KING.



### Idris Soda Water

. in Chinaways .

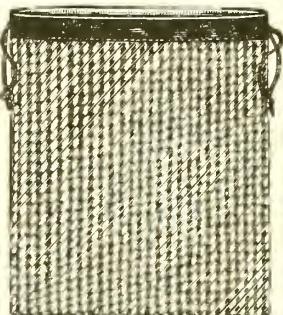
Will be found much superior to Soda Water drawn from any other syphon, being much sharper, owing to the absence of valvular obstruction in Chinaways. The water possesses the brilliancy and sparkle characteristic of IDRIS.



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Branches—Liverpool, Southampton, Canterbury & Teddington.

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### SUPER QUALITY CHECK.

Nos. 1	2	3	4	5	6	7	8
5/6	6/6	8/3	10/3	11/3	14/-	18/-	20/-
doz.							

5/6 6/6 8/3 10/3 11/3 14/- 18/- 20/- doz.

### SPECIAL QUALITY CHECK.

Nos. 1	2	3	4	5	6	7	8
4/-	4/6	5/6	6/9	8/-	10/-	12/-	14/-
doz.							

4/- 4/6 5/6 6/9 8/- 10/- 12/- 14/- doz.

### No. 2140. DICE CHECK.

Nos. 1	2	3	4	5	6
4/-	4/6	5/3	6/6	7/-	9/-
doz.					

4/- 4/6 5/3 6/6 7/- 9/- doz.

### THE "CLIMAX."

Proofed on both sides.

Nos. 1	2	3	4	5	6	7	8
8/6	10/-	12/-	15/-	18/-	20/-	23/-	26/-
doz.							

8/6 10/- 12/- 15/- 18/- 20/- 23/- 26/- doz.

## SPONGE WRAPPERS.

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Without Pocket.

18 x 18	20 x 20	22 x 22	24 x 24
15/-	18/-	20/-	23/-
doz.			

15/- 18/- 20/- 22/- 24/- 23/- doz.

### SUPER QUALITY CHECK.

With Pocket.

18 x 18	20 x 20	22 x 22	24 x 24
18/-	21/-	24/-	27/-
doz.			

18/- 21/- 24/- 27/- doz.

### THE "CLIMAX."

Proofed on both sides. Without Pocket.

20 x 20	22 x 22	24 x 24
24/-	29/-	33/-
doz.		

20 x 20 22 x 22 24 x 24  
24/- 29/- 33/- doz.

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Proofed on both sides. With Pocket.

20 x 20	22 x 22	24 x 24
28/-	34/-	40/-
doz.		

20 x 20 22 x 22 24 x 24  
28/- 34/- 40/- doz.

Above Prices are subject to 7½ per cent. 1 month.

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### SPECIAL OFFERS IN CHEMISTS' SUNDRIES.

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FIRST FIELD

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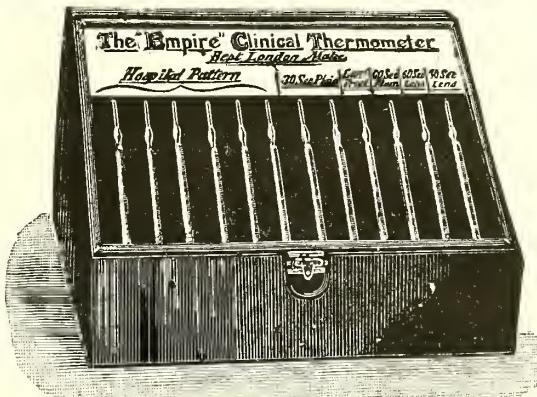
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*Guaranteed Best London Make from Well-seasoned Tubes.*

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"Hospital" Pattern, in metal case,	per doz. 9 0
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Certificate of accuracy for any Thermometer ...	per doz 5 0



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Each Thermometer is packed in a specially designed card box with descriptive label on lid. We accept all risk from breakage in transit if advised by return of post.

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Impregnated with  
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ESTABLISHED 1838.

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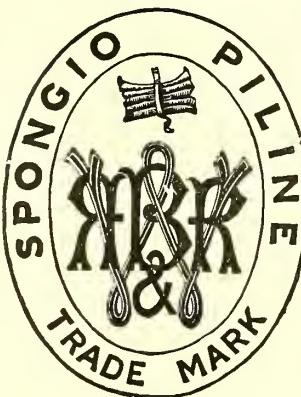
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For Rheumatism, Promoting Perspiration, and for the application of Stimulating Liniments.

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The Original and only Genuine

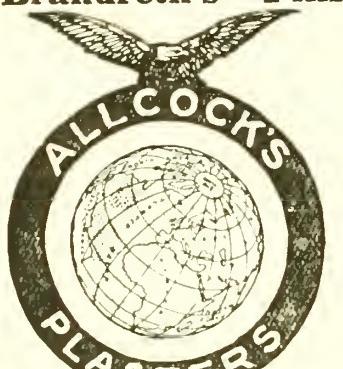
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We spin the yarns from the raw material, weave the cloth, bleach, raise, and finish on our own premises.



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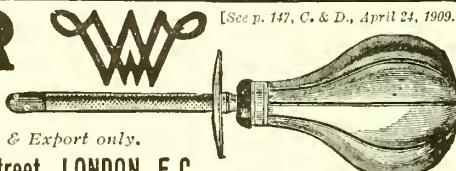
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WM. WARNE & CO., Ltd., 29 Gresham Street, LONDON, E.C.

[See p. 147, C. & D., April 24, 1909.]



TO WHOLESALE BUYERS AND SHIPPING MERCHANTS ONLY.

Hand or Machine Made. To suit all Climates. Absolute Purity of Contents. Best Finish.



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106 Midland Road, St. Pancras, London, N.W.

Beg to call attention to their REDUCED PRICES.  
We make the New Shape, Oval Fronted Bottles. No extra charge.

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3 & 4 6 & 8 12 16 ounce. } Round edges, plain or  
7/6 8/6 12/- 18/- per gross } graduated, clear blue tinted

PANEL BOTTLES (reduced prices).  
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7/6 8/- 8/- 9/- 10/- per gross.

WHITE PHIALS—GOOD QUALITY.  
1 1 1/2 2 ounce  
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Six gross and upwards, assorted or otherwise, sent carriage paid to any address in the United Kingdom. Smaller quantities not carriage paid.

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For BED WARMERS.

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Customers can have their names, &c. printed on reverse side.

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DRUGGISTS' SUNDRIES. Surgical Rubber Goods. Enemas, Injection Bottles, Douches and Syringes of every description. Rubber Sponges, Feeding Bottles, Baby Comforters. Surgical Glass, and Enamelled Iron Ware. Trusses, Bandages, Glass Bottles used by Druggists, Perfumers, &c. Specialities, and Sundries of every Description.

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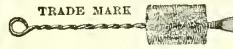
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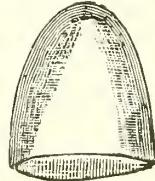
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Reliable workmanship. Popular prices. Moderate charges for gold,  
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without which  
none are genuine.  
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*W. J. Rendell*  
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Registered also in Australia, India, The Cape, The Argentine, Germany, &amp;c.

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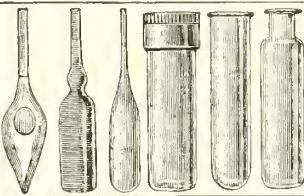
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17 Leather Lane, LONDON, E.C.Or may be obtained through any of the wholesale houses at 1*l*/*9* doz.  
See ANTI-CUTTING RECORD for July, page 155.**JOS. ZAHRADNIK,**

Glass-ware manufactory Miletin,

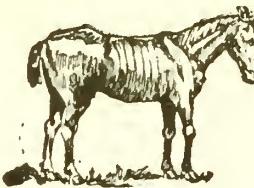
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of all kinds.

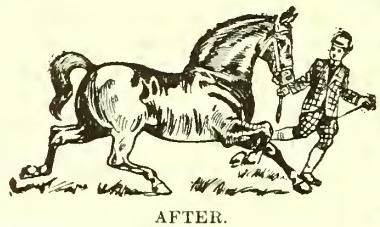
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CHRISTY'S, 4 OLD SWAN LANE, E.C.



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There are many preparations on the market, but few really good ones. One of the best (as testified by users' opinions, not ours) which has been used in India for more than 20 years, and is now being largely taken up by H.M. Cavalry Regiments, Stud Farms, &c., is

# JOHN'S CONDITION POWDER

(Registered Trade Mark; EQUINOPULV).

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15th February, 1908.

Dear Sirs,—I have much pleasure in stating that I have given your Condition Powder a thorough test, and the results have been most satisfactory in every way.

I find that the animals experimented upon have been rapidly restored to perfect condition, and shall be pleased to recommend the preparation to anyone who may have need of a medicine such as this in their stable.

For myself, I am so pleased with the improvement brought about by its use that I will not be without a supply on my premises in the future.

(Signed) N. STEVENS.

"Coldfield Lodge," Fortis Green Road,  
Messrs. A. JOHN & CO.,  
54 Piccadilly, W. East Finchley,  
20th June, 1908.

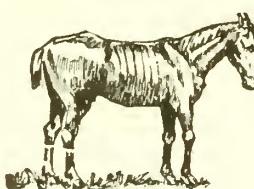
Gentlemen.—Having thoroughly tested your Condition Powder for Horses, I would like to say that I find it most effective and economical. It completely exterminates worms, and promotes the appetite and digestion. It is a most invaluable preparation for horses when out of condition, and quickly alters their appearance.

I have never tried a better remedy, and shall recommend your Powder to all I come in contact with.

I am, dear Sirs, Yours faithfully,  
(Signed) A. WALKER,  
*Job and Riding Master.*

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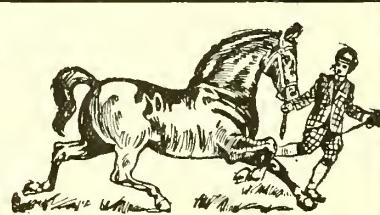
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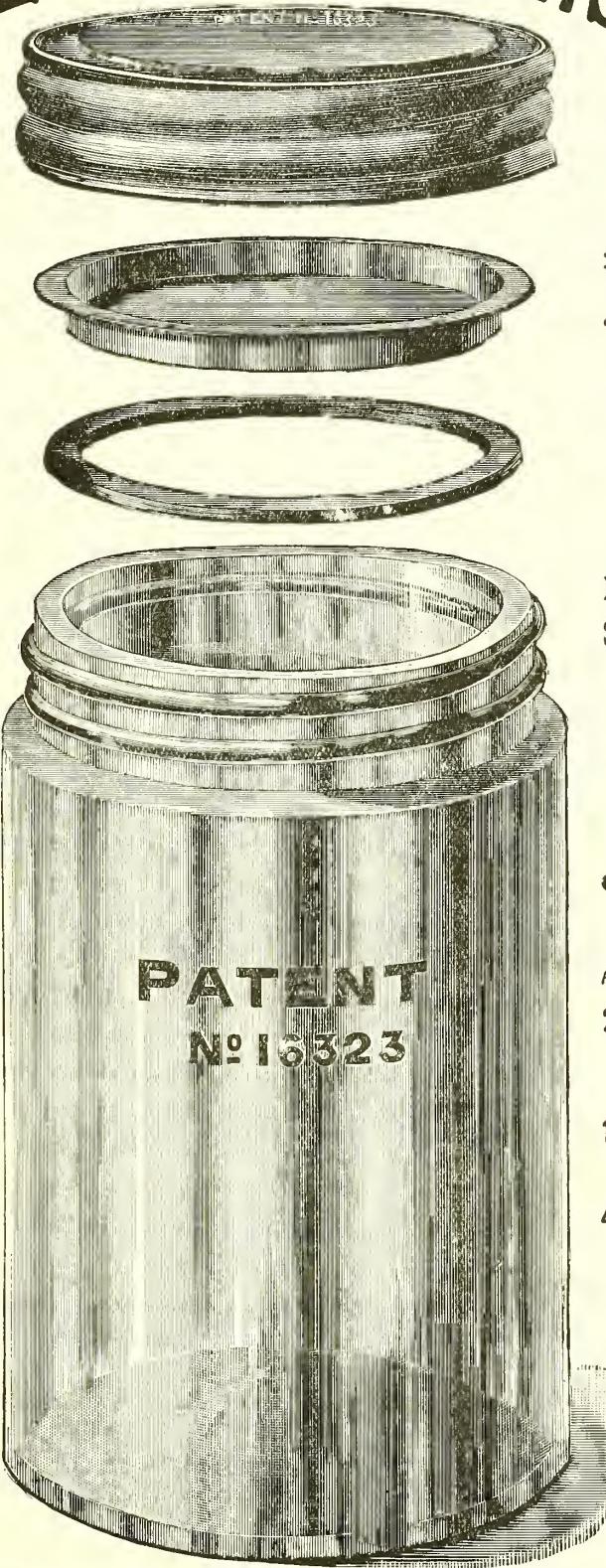
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**Fig. 1.**—The Bed Pan complete as for use. The illustration shows the transverse wedge shape of the pan—this greatly facilitates the work of placing under the patient and adds to comfort of user by relieving pressure on spine. Note position of handle at side of patient, not in front, as in the case of the old-fashioned slipper.



Fig. 1.

**Fig. 2.**—Demonstrating the detachable "Comfort Ring." Note the deep flange on shallow side of pan—this prevents any spilling of contents in withdrawing pan. The deeper side is entirely without flange, to facilitate the operation of emptying and cleaning. (See Fig. 3.)

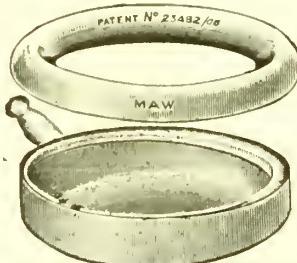


Fig. 2.

**Fig. 3.**—Shows in section the graduated inner flange as explained above. The entire contents are poured instantly and at one operation into any receptacle. The pan is as instantly and easily flushed. This is best done by holding in an ordinary W.C. pan and allowing the flush of water to circle round the pan. The use of a mop is entirely unnecessary.



Fig. 3.

The rapidity and ease with which the above operations are carried out reduce to an absolute minimum a task at once unpleasant and harmful to health, and must mitigate—possibly entirely obviate—such distressing consequences as Nurses' Sore Throat, &c., &c.

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